

APPLE ANNOUNCES MAC OS X—DETAILS INSIDE!

A better machine. A better magazine.

# Mac ADDICT 23

Back by popular demand  
**HACK YOUR MAC98!**

**6** TIPS for realistic  
Illustrator art

**10** EASY STEPS to a great  
FileMaker database!

JULY/98

# WOW!



## Apple reinvents the Mac.



[www.macaddict.com](http://www.macaddict.com)

**imagine**  
the future of media

\$7.99 U.S. / \$8.99 CANADA









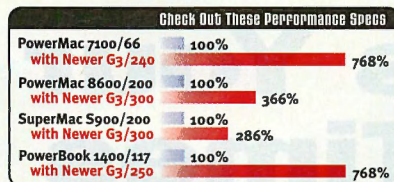
# "oh yeah, right! You want to skip our vacation so you can get a faster Mac?"

## Sometimes Newer Is Smarter Than New.

You do need a vacation. Or at least that's what your family keeps telling you. But, you also need a faster Mac. It's a tough decision, but maybe you don't have to make that choice, because there is another option: a Newer Technology MAXpowr™ G3 processor upgrade card. They're easy to install and can potentially save you thousands of dollars compared to buying a whole new system.

Newer Technology makes processor upgrade cards for almost every PowerMac™ and are adding more machines to the list with faster processor speeds as you

read this. With a MAXpowr G3 card, you'll have a faster processor with a much faster cache. In fact, it can make your old Mac one of the fastest desktop computers



available even compared to Apple's new screaming G3 machines. Thanks to Newer Technology, your older, slower PowerMac has new life. Which makes waiting for a brand new machine a lot less painful, not

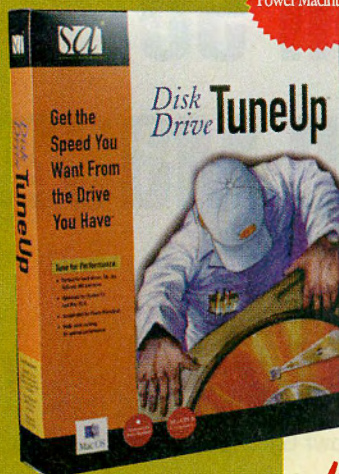
to mention taking a vacation right now feasible. And for those of you who just can't be pulled away, Newer Technology even has a G3 upgrade for your PowerBook, perfect while the rest of your family relaxes.



To find out how to make your old Mac newer visit  
[www.newertech.com](http://www.newertech.com) or call 1-316-943-0222



# Get The Speed You Want From The Drive You Have!



Disk Drive TuneUp 2.0 gives you:

- Blazing fast reads using our exclusive multi-level caching using RAM and Hard Disk; great for Zip™, Jaz™, MO and older hard drives
- HFS+ support for Mac OS 8.1
- Reliable IDE and SCSI drive support
- Faster bootups too!

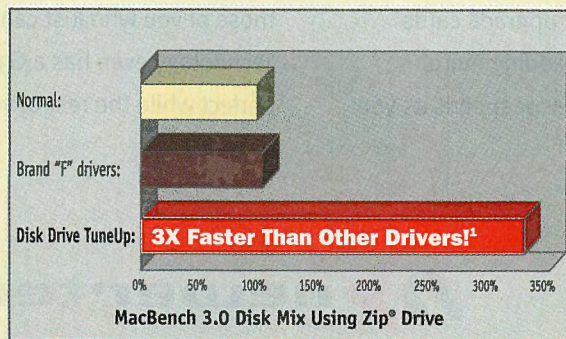
**"Tune Up" your disk drive just like your car!**

## Access Your Files Up To 3 Times Faster!

Also available from SAI:



CD/DVD Drive TuneUp™



¹ Ziff Davis, MacBench® 3.0 scores using as Iomega® Zip® drive on an Apple Macintosh Performa 6400/180 running Mac OS 8.0 with 24 MB RAM and VM on. All products used in this test were shipping versions available to the general public. This test and its results were not verified by Ziff-Davis. Individual gains depend on the type of media used, caching parameters established and system specifics.

**TuneUp is:**

- ✓ **Fastest**
- ✓ **Easiest**
- ✓ **Affordable**

**Work Faster Now!**

**Get Disk Drive TuneUp & CD/DVD  
Drive TuneUp at:**

**COMP USA: 800-COMPUSA**

**MAC ZONE: 800-248-0800**

**MAC WAREHOUSE: 800-255-6237**

**MAC MALL: 800-222-2808**

**RESELLERS CALL:**

**INGRAM  
MICRO**

**800-456-8000**

Disk Drive TuneUp SKU: #596358

CD/DVD Drive TuneUp SKU: #596359

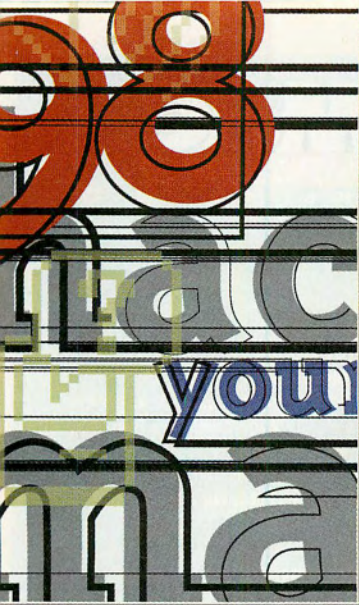


Software Architects Inc.

[www.softarch.com](http://www.softarch.com)

Copyright © 1997-98. All rights reserved. Disk Drive TuneUp, CD/DVD Drive TuneUp and the SAI logo are trademarks of Software Architects, Inc. Zip is a registered trademark of Iomega Corporation. Mac OS is a trademark of Apple Computer Inc. All other trademarks are trademarks or registered trademarks of their respective companies.





JULY 1998

## highlights

### 24 The Mac Is Back

It's fresh, it's fast, it's the most amazing Mac to come out of Cupertino since the original. We're just drooling—like everyone else—over the thought of getting our hands on one of these.

**BY CHERYL ENGLAND**

### 28 Hack Your Mac 98

There's nothing more fun than poking around where you shouldn't—unless you throw in adding custom key combinations, making snarky new-mail sounds, or whipping up your own startup screen. And, unless, of course, it lands you in jail. **BY DAVID K. EVERY**

### 38 10 Tips for FileMaker

FileMaker Pro makes databases easy, but not that easy. Here are 10 vital tips to help you get the most out of FileMaker. We've even given you a sample database (on The Disc) to get started! No questions asked! **BY DAVE PROCHNOW**

## power up

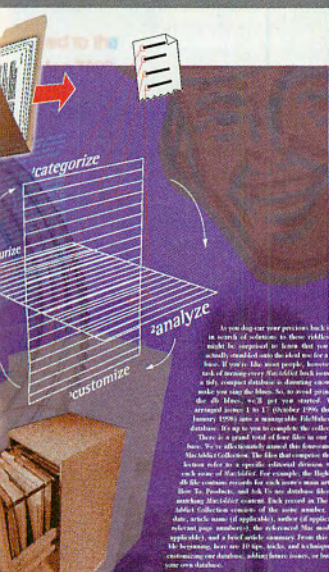
### 66 Realistic Illustrator Art

After you follow our tutorial on making your own realistic postage stamp using Adobe Illustrator, you can show the post office a thing or two. We provide the template and techniques—it's up to you to make your mark. Postmark, that is. **BY DAVE PROCHNOW**

### 68 Learn From the Best Web Pages

Although the Web is full of mediocre offerings, there are lots of sites that can teach us how to build better Web pages. We dissect the *San Jose Mercury News* site, revealing its secrets for all to use. **BY JOSEPH O. HOLMES**

MAC HACKING is not a side effect of smoking, but it can be dangerous!



NO MORE EXCUSES for disorganized data. Shape up or ship out!

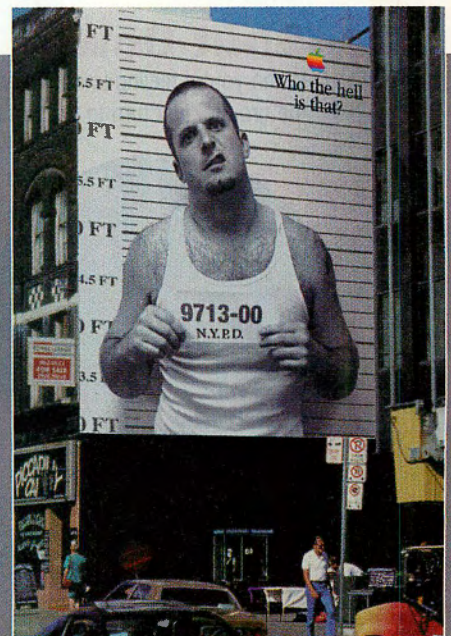


DUDE, GO POSTAL! (In a kinder, gentler way, of course.)

WHAT ELSE can we say. It speaks for itself.

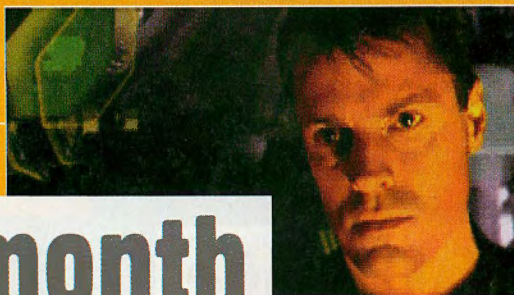


GET A SNEAK PREVIEW of Apple's new ad campaign on page 96.





YOU DA MAN!  
Show us your  
interactive skills,  
baby!



**Mac**  
**ADDICT**  
THE TEAM

PUBLISHER/EDITORIAL DIRECTOR Cheryl England

#### EDITORIAL

EDITOR David Reynolds  
MANAGING EDITOR Ruth Henrich  
SENIOR EDITOR Nikki Echler  
ASSOCIATE EDITORS Robert Capps, Jennifer Ho (reviews)  
DIGITAL MEDIA EDITORS Wade Albright, Kris Fong  
ONLINE EDITOR Mark Simmons  
CONTRIBUTING EDITORS Raf Anzovin, Steven Anzovin,  
Joseph O. Holmes, Ross Scott Rubin, Buz Zoller

#### ART

ART DIRECTOR Ken Bousquet  
ASSOCIATE ART DIRECTOR Adam Vanderhoof  
DESIGNER Chris Vanderhoof

#### PRODUCTION

PRODUCTION DIRECTOR Richard Lesovoy  
PRODUCTION COORDINATOR Susan Meredith

#### ADVERTISING

NATIONAL AD MANAGER André Lengyel  
REGIONAL AD MANAGER Don Kimenker  
REGIONAL AD MANAGER Kevin White  
MACADDICT NETWORK AD MANAGER Camilla Colegrave  
MARKETING MANAGER Mary Lachapelle  
ADVERTISING COORDINATORS Sharon Chan, Jana Massey

#### CIRCULATION

NEWSSTAND DIRECTOR Bruce Eldridge  
NEWSSTAND MANAGER Thea Selby  
NEWSSTAND ANALYST Terry Lawson  
SUBSCRIPTION DIRECTOR Kate Bailey  
FULFILLMENT MANAGER Peggy Mores  
DIRECT MAIL MANAGER Amy Nibbi

#### Imagine Media, Inc.

PRESIDENT, IMAGINE DIGITAL Mark Gross  
VICE PRESIDENT/CIRCULATION Holly Klingel  
DIRECTOR, CD-ROM DEVELOPMENT Thomas Hale  
VICE PRESIDENT/CFO Tom Valentino  
PRESIDENT Chris Anderson  
INTERNATIONAL LICENSING: Robert J. Abramson &  
Associates, Inc., 720 Post Rd., Scarsdale, NY 10583

#### REPRINTS

For reprints, contact RMS at 717-560-2001.

#### SUBSCRIPTION QUERIES

Please phone customer service toll-free at 888-771-6222.

#### Volume 3, Issue 7

**MacAddict** (ISSN 1088-549X) is published monthly by Imagine Media, Inc., 150 North Hill Dr., Suite 40, Brisbane, CA 94005, USA. Periodical-class postage paid at Brisbane, CA, and at additional mailing offices. Newsstand distribution is handled by Curtis Circulation Co. Basic subscription rates: one year (12 issues + 12 CD-ROMs) U.S. \$39.99; Canada \$43.95; U.S. prepaid funds only. Canadian price includes postage and GST 128220688. IPM 0962392. Outside the U.S. and Canada, price is \$53.95; U.S. prepaid funds only. POSTMASTER: Send address changes to MacAddict, P.O. Box 58251, Boulder, CO 80328-8251. Imagine Media, Inc. also publishes boot. Ultra Game Players, Next Generation, PC Gamer, and PSM. Entire contents copyright 1998, Imagine Media, Inc. All rights reserved. Reproduction in whole or in part is prohibited. Imagine Media, Inc. is not affiliated with the companies or products covered in MacAddict Standard Mail Enclosed Edition. A, A1, A2, A3, B, B1, B2, B3. PRODUCED IN THE UNITED STATES OF AMERICA.

BULK RATE  
U.S. POSTAGE PAID  
Waseca, MN  
Permit No. 348

# every month

## 12 Editor's Note

The iMac shows how Amelio was wrong and Jobs is right.

## 14 Letters

We've warned you not to drink milk while reading these. Really.

## 16 Get Info

Mac OS X is revealed at the Worldwide Developer Conference. Also, a preview of Myth II and a new MacAddict Index.

## 22 Cravings

Five fantastic Mac products to fan the flames of your burning desires.

## 44 Reviews

It's a hardware extravaganza! We review and rate the new Power Macintosh G3/300, the NUpower G3 upgrade for the PowerBook 1400, and the MACH Speed G3 upgrade card for desktop Macs. We also torture-test 10 other products you've thought about buying.

## 70 PowerPlay

If you're an Ambrosia fan, you'll want to check this out. We dig into Ambrosia's entire game lineup, including two brand-new titles. We even put all those games on The Disc! Don't say we never give you anything!

## 72 Ask Us

So many questions, so many answers! We'll tell you how to keep America Online from kicking you off, how to find out if you're using Mac OS Extended Format, and how to convert downloaded WAV sounds into alert sounds.

## 96 Shut Down

When you're feeling unsound, when market share numbers have you on the ground, just turn to the last page and turn that frown upside-down!

CAN YOU  
RISE to the  
occasion?  
Shoot 'em up in  
Mars Rising.



THE UNITY OF perfection becomes  
the perfect unit. Om!



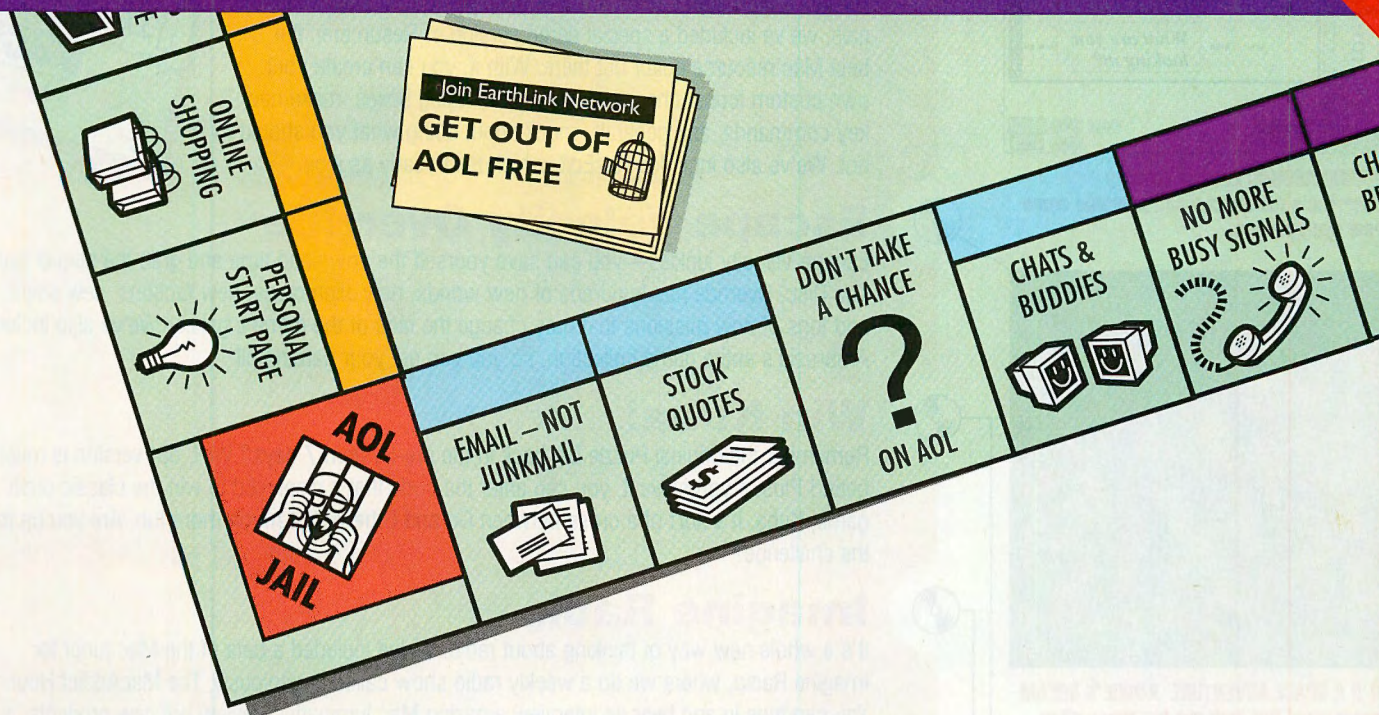
What's up with that? Guinea worm? Who really  
knows the way to San Jose? And welcome, Kris.  
What's up, Chicken Butt?





# Tired of waiting for your turn to get on the Internet?

Find us on the enclosed CD.



## HERE'S YOUR CHANCE TO GET OUT OF AOL FREE.

Switch to EarthLink and get your email, news, stock quotes, sports scores, entertainment, shopping, chat, and an instant messaging program—all the things people like about AOL—without the busy signals, failed connections, junk mail, lost mail, and endless commercial messages you're forced to click NO THANKS to. And we're still just \$19.95 per month for unlimited access. Playing the Internet game should be fun! So, what are you waiting for?

Call now

# I-888-QUIT AOL, ext. 3563

7 8 4 - 8 2 6 5

### FOR JUST \$19.95 PER MONTH, YOU GET:

Unlimited Internet usage  
Nationwide access  
Over 1,300 local dialup #'s  
Choice of browsers

Complete software for  
Windows and Mac  
Personal Start Page<sup>SM</sup>  
Email

Free 6MB Web site  
Free Internet user guide  
Bi-monthly newsletter  
Toll-free 24-hour help



September 9, 1997  
Internet Access Provider



February 1998  
Internet Service Provider



It's your Internet.™

or visit us at:

[www.earthlink.net/quitaol/](http://www.earthlink.net/quitaol/)

©1998 EarthLink Network, Inc. Trademarks are the property of their respective owners. All rights reserved.



# the disc

## highlights

### Hacking tools

For those who aren't afraid to delve deeply into their Mac's internals, we've included a special demo version of Resorcerer, the best Mac resource editor out there. With it, you can create your own custom icons, change sounds, alter dialog boxes, make new key commands, and generally muck about doing what you should not. We've also included ResEdit, which isn't nearly as nice.

### Escape Velocity Override

Escape Velocity junkies—you can save yourself the download time and grab the sequel from The Disc. Override has hundreds of new worlds, new alien races, new factions, new ships, and tons of new missions that may change the face of the game's galaxy. We've also included Ambrosia's entire game collection, so you can get your gaming fill.

### Win Kuba!

Remember the original Puzzle DA back in the pre-System 7 days? Well, our version is much better! Plus, if you solve it, you can enter the code that's displayed to win the classic push game, Kuba. It's sort of a cross between Go and Othello, but much more fun. Are you up to the challenge?

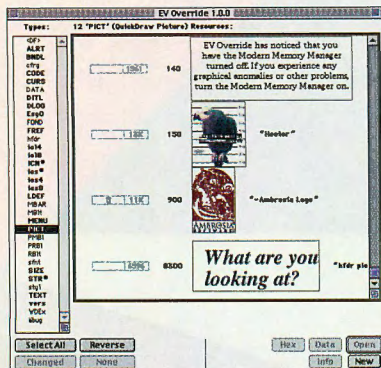
### Imagine Radio

It's a whole new way of thinking about radio. We've included a beta of the Mac tuner for Imagine Radio, where we do a weekly radio show called, ingeniously, The MacAddict Hour. You can tune in and hear us interview amazing Mac luminaries, review hot new products, and dispense technical advice. You can also tune in to lots of other Imagine Radio stations for music, book reviews, and AP news.

## goodies

### From Apple

Apple Memory Guide, Apple Spec Database 2/98, Apple System Profiler, AppleShare IP 5.0.3, ColorSync 2.5, Disk Copy 6.2, DOS Compatibility SW Update, Internet Address Detectors 1.02, Location Manager, Mac OS 8.1 updater, Mac OS Runtime for Java, Password Security 1.0.6, PowerBook ZoomedVideo Update 1.3, PC Compatibility Software Update, Personal Web Sharing, QuickTime 3.0



**POKING AROUND** Escape Velocity Override's resources can produce some real eye-openers.



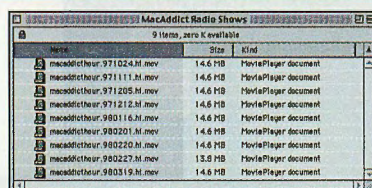
**IT'S A SPACE ADVENTURE JUNKIE'S DREAM** come true! But look out for those alien cruisers—they can be pretty nasty!



When you've solved the puzzle, it should look like this. Can you do it?



**INSTALL THE IMAGINE RADIO TUNER**, and turn your Internet connection into a pipeline to the heart of Imagine Media.



**ALTHOUGH WE WERE A BIT CAMERA SHY** this month, we make up for it by including the first nine MacAddict Hour radio shows in QuickTime 3.0 format. Now you can listen to our archived shows. Hey—we're not broadcast professionals!



**WHENEVER** you see this icon in the magazine, pop in The Disc for a special treat.



With Diamonds  
This Perfect,  
The Only Thing  
We Cut  
Are The Prices.

Mitsubishi's full line of award-winning DIAMONDTRON™ aperture grille monitors have a proven reputation for quality, reliability, and value. And now you can get all this at prices lower than ever before.

Plus, you'll have added confidence knowing that all Mitsubishi Diamond Plus® and Diamond Pro® Series monitors are backed by a full 3-year warranty, combined with service and support programs that are already the best in the business. With the new lower pricing, everyone can experience the DIAMONDTRON™ difference. Get all the details by contacting Mitsubishi Electronics today.



USA: 1-800-843-2515 • Canada: 1-800-387-9630 • QWIKFAX: 1-800-937-2094  
World Wide Web: [www.mitsubishi-display.com](http://www.mitsubishi-display.com)

### Diamond Pro® Series

*DIAMONDTRON solutions for graphics professionals*

**New!** Only \$1699  
Diamond Pro 1000

- 21"/19.7" DVI\*
- 1800 x 1440/76 Hz
- 30-115 kHz auto-scan range

**Reduced to \$1249**  
Diamond Pro 91TXM

- 21"/19.7" DVI\*
- 1600 x 1200/75 Hz
- 30-95 kHz auto-scan range

**Reduced to \$799**  
Diamond Pro 700

- 17"/16.0" DVI\*
- 1600 x 1200/75 Hz
- 30-95 kHz auto-scan range

### Diamond Plus® Series

*DIAMONDTRON displays for people who mean business*

**New!** Only \$1399  
Diamond Plus 100e

- 21"/19.7" DVI\*
- 1600 x 1200/85 Hz
- 30-108 kHz auto-scan range
- USB-ready

**Reduced to \$589**  
Diamond Pro 87TXM

- 17"/16.0" DVI\*
- 1600 x 1200/66 Hz
- 30-86 kHz auto-scan range

**New!** Only \$529  
Diamond Plus 70

- 17"/16.0" DVI\*
- 1280 x 1024/65 Hz
- 30-70 kHz auto-scan range



**MITSUBISHI**  
DISPLAY PRODUCTS  
*Innovation On Display<sub>sm</sub>*

©1998 Mitsubishi Electronics America, Inc. DIAMONDTRON is a trademark of Mitsubishi Electric Corporation. Diamond Pro and Diamond Plus are registered trademarks of Mitsubishi Electronics America, Inc. Microsoft, Windows and the Windows logo are registered trademarks of Microsoft Corporation. Mac and the Mac OS logo are trademarks of Apple Computer, Inc. Monitor prices and specifications subject to change without notice. \*DVI (Diagonal Viewable Image)



# every month

## Software

### Communication

Anarchie 2.0.1, Cinnamon WebMaster Suite 1.2.2, Claris Emailer Trial 2.0, CyberGauge Demo 2.0.1, CyberViewer PPC 1.2.2, Daemon 1.1.0, Download Deputy 3.0.1, Fetch-O-Matic 2.1, FreePPP 2.6.2, GearBox 1.5, Home Page Trial 3.0, Imagine Radio, Internet Explorer 4.0, iView 3.0.1, Netscape Communicator and Navigator, Play it Cool 2.7, PublicSpace 1.3, QuickNailer 1.5, ShadowIRC 0.7.0, Shockwave, Stalker Internet Mail Server, Web Devil 3.1.1

### Compress and Translate

DropStuff with Expander Enhancer 4.5, Stuffit Expander 4.5

### Configuration

Assimilator 2.0

### Development

CronoTask, FileMaker Pro Trial 4.0, ResEdit 2.1.3, Resorcerer Demo 2.2

### Disk & File

Disinfectant 3.7.1, DiskTracker 1.1.3, Media Wrappers, SAM Trial Install

### Fun & Games

Abuse Demo, Apeiron 1.0.2, Astrorock 2000, Avara 1.0, Barrack 1.0.3, Bub & Bob 1.2.2, Bubble Trouble 1.0.1, Bumbler Bee-Luxe 1.0, Chiral 1.0.4, Cobra Gunship 1.3.1, Dark Corona PEGASUS 1.0.5, Escape Velocity 1.0.5, Escape Velocity Override 1.0.0, Foobar Versus the DEA, Space Cab 1.2, The Fantastic War, Harry 1.0.1, Pop!, Maelstrom 1.4.3, Mars Rising 1.0.1, NameThatGame 1.0, rotYx 1.5, Swoop 1.0.2, Tempest 2000 Demo

### Graphics & Sound

Acrobat Reader 3.01, BigPicture 3.7.4, cd-key 1.2, FretPet 1.3, GraphicConverter 3.2.1, Icon Archiver 2.3, ImageViewer 4.6, Karaokeing 1.0, MacFont 3.0, MooVer 1.6, MovieUtilities CMM 1.2, Musicshop Demo, P-in-P, Painting 1.5, Scorpion BarCode 1.20, Test Strip Demo 2.0.2, Ultimate LPP 5.1

### Information

Birthdays and Such, InformINIT 8.1, Virtual Survival

### Math & Science

KnowledgeMiner 2.2.2

### Productivity

MultiTimer, Office98 Demo, People Lister 1.0.1

### Text Processing

General Edit Lite 1.0.1, textSOAP 1.0

### Updates

Conflict Catcher 4.1.1, Myth 1.2, Quake 1.09

### User Interface

Action Files 1.0, CapsLight 1.2, ClickTyper 1.2, Custom Menus 1.1, DayLightSavings, Default Folder 2.8.2, DeskPictRotater, Desktop Resetter

## Our Disc Sponsors

To find immediate information from our sponsors, go to the index (option-click any help screen). Or you can wait until you see a message from them in the lower right-hand corner of the main screen. Clicking on the message causes a TV screen to slide down from the top of the page, showcasing more information. You can also access sponsor information from the main window in the Finder.

### Bungie—Myth

800-295-0060

<http://www.bungie.com>

Myth is a tactical-level game of epic battle set in a fantasy world. A multimetric game, Myth gives gamers unprecedented freedom to view the terrain and their forces, orbiting around the field or zooming in for a close-up. Mastery of formations and disciplined movement of armies are critical to success. Myth features cross-platform networking, while Bungie's MetaServer system makes Internet play simple. The game includes maps designed for networking, as well as alternate networking scenarios like the split-second action of Steal the Bacon and the brutal melee of Last Man on the Hill.

### EarthLink—TotalAccess

800-395-8425

<http://www.earthlink.net>

EarthLink Network has received consistently high marks as the nation's best Internet service provider, based on quality of service and tech support. EarthLink membership includes unlimited Internet access; unlimited email; a free personalized start page you can customize with local weather, stock information, news, and sports scores; Web support; and all your favorite links.

You also get a free 6MB of Web space; a free subscription to bLink, EarthLink's helpful magazine; and the most popular Internet browser available—Netscape Navigator. There are two ways for you to connect: a standard 3-day trial or a special 14-day trial with a low-rate subscription to MacAddict.

For the 3-day trial, just install the software and enter all the information it prompts you for, including a credit card number. You can test the service for 3 days; after that, you will be billed for \$19.95—unless you cancel. This includes full service and unlimited connect time.

The 14-day trial is a bit different. Subscribe to MacAddict at a special low price, and you'll get 14 days to check out EarthLink. If you've already got a subscription and you take advantage of this offer, you'll get an extra 12 issues added to your account. What a deal! \$19.95 a month gives you unlimited time online and all the goodies you'd ever want. And with two great trial plans available, you've got nothing to lose.

### FWB

800-581-4FWB

650-482-4800

<http://www.fwb.com>

Spiffy summer savings bundle! Get two award-winning products for less than the price of one! For a limited time only, FWB Software is offering Hard Disk Toolkit—Personal Edition 2.5 and the Spiffy-rated CD-ROM Toolkit 3.0 for only \$39.95! Simplify all your storage needs, supercharge CD-ROM performance, and save up to \$100. Call your favorite catalog today. Offer ends September 30, 1998.

### MacSoft—Deadlock

800-229-2714

<http://www.wizworks.com/macsoft>

Only one race will survive. Time is short. Seven alien races struggle to build their empires, but only one will dominate. In Deadlock, every decision you make determines the ultimate fate of your people, your empire, and your survival. This is the incredible strategy of interplanetary conquest.

### Power On—Action Files

800-344-9160

<http://www.poweronsw.com>

Action Files from Power On Software may be the most powerful productivity utility you can buy. It provides the easiest and fastest way to manage and organize files. All the power and control you need is contained in a custom menu bar, inserted into every application's Open and Save windows. You can expand the menu bar to show vital file information, and it allows one-click sorting by name, date, kind, and more. Additionally, a powerful search engine enables you to locate files by a multitude of criteria from within the application itself. Designate files and folders as favorites and navigate back to them with a single click, or use the automatic rebound feature to return to any location. This is the ultimate replacement for Super Boomerang users and is compatible with Mac OS 7.5 through 8.1.

### Village Tronic—

Picasso 540 3D card demo

800-932-6442

<http://www.villagetric.com>

Did you ever work with a video card in your Mac that was able to:  
• do 3D rendering in a window? • run Glide games? • export an animation to your VCR via video out? • watch the current Apple commercial on ABC? • mix different audio sources?  
Never done that before? Catch your breath, it's here! Just fire up our application on The Disc and be stunned!





## highlights

### (Imagine) Radio Days

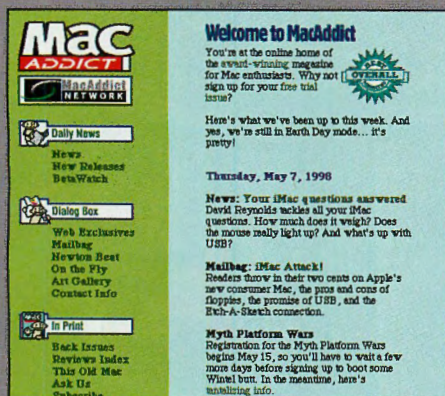
For complete info on our MacAddict Hour show, including the care and feeding of the Imagine Radio tuner and an archive of old episodes in QuickTime format, swing by <http://www.macaddict.com/radio> and get kitted out. It's must-hear radio, or something like that.

### The Rocket's Red Glare

Your online editor may be an expatriate Brit, but he knows to put on the stars and stripes for July 4. Come check out our new look—which, as per our new practice, will remain in effect until our next makeover.

### Macworld Is Your Oyster

We'll be trekking out to New York for the biggest, baddest Mac fiesta since, well, Macworld San Francisco. Look for daily reports from the East Coast trade show's new digs, starting with the July 7 keynote.



WHENEVER you see this icon in print, visit [www.macaddict.com](http://www.macaddict.com) for links and additional resources.

HERE'S OUR HOME page as of early May, in natural Earth Day colors.

## every month

[www.macaddict.com](http://www.macaddict.com)

<http://www.macaddict.com/issues>

Links and extra resources to accompany the magazine you hold in your eager hands.

<http://www.macaddict.com/contact>

Yes, we want to hear from you! Here are email addresses and more.

<http://www.macaddict.com/subscribe>

Join us! Here's our fabulous free trial issue subscription offer.

<http://www.macaddict.com/service>

Subscription problems? Missing issues? Vexing questions? Visit our customer service pages.

<http://www.macaddict.com/cdrom>

Liner notes on the MacAddict CD-ROM, late-breaking info, and disc replacement forms.



**MacAddict  
NETWORK**

[www.macaddictnetwork.com](http://www.macaddictnetwork.com)



<http://www.macfixit.com> MacFixIt reports the latest in news and tips on Mac troubleshooting.



<http://ogrady.com> O'Grady's PowerPage brings daily news and resources to the mobile Mac community.



<http://www.infoxcar.com/atat> As the Apple Turns tunes in every day for the latest Apple Computer soap opera twists.



<http://www.macaddict.com> You know us, right? Well, this is our funky Web site, updated daily with fresh fun and games.



<http://www.evangelist.macaddict.com> Evangelist is the official home of Guy Kawasaki's mailing list, bastion of Mac advocacy.



<http://www.maccentral.com> Every day, MacCentral will stuff you to the gills with news, product announcements, and special reports.



<http://www.macsurfer.com> MacSurfer's Headline News scours the Web for all the news that's fit to link on Apple.



<http://www.versiontracker.com> VersionTracker's up-to-the-minute listings keep tabs on every Mac software product that's new.



<http://www.imgmagazine.com> Inside Mac Games is a monthly CD-ROM Mac games magazine and Web site.



<http://www.iconfactory.com> Iconfactory turns your desktop into a pixelated paradise with its fab selection of handcrafted icons.



<http://www.everymac.com> EveryMac's exhaustive catalog of Macs and Mac compatibles provides complete specs and technical data.



<http://www.saracen.com/applejedi.html> AppleJedi is the tub-thumping e-zine for evangelists, developers, and Defenders of the OS.



### EXPERIENCE PAYS OFF: THE 3X ZOOM.

And we've had more than enough experience, 78 years to be exact, to make it all worthwhile. With an insistence on superior optics, an obsession with design and size, a never-ending search for the optimum in effortlessness as well as ergonomics, it's little wonder that Olympus has pushed the 35mm envelope as far as we have. And now all that know-how and wizardry has been poured into our D-600L digital camera. Yes, it looks like a 35mm and feels like a 35mm. And often acts like one, too.

The new 3x zoom lens is razor-sharp, seven element Olympus all glass aspherical, F2.8, autofocus, with macro. The equivalent 35mm zoom focal length: 36mm to 110mm.

Some other distinctions: a mere 16.5 ounces in weight; center weighted metering as well as spot metering for difficult lighting conditions; dioptic viewfinder correction; +/- 3 step exposure correction; a four mode auto flash with red-eye reduction.



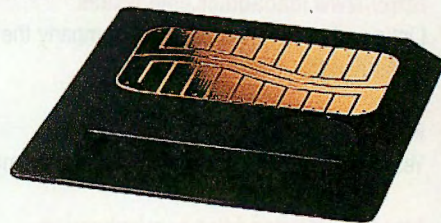
Your computer, our camera and bundled software. Now crop, enlarge, enhance, retouch, have fun.

### MEGA PIXELS

Mega is an understatement. The CCD resolution on the D-600L is an astounding 1.4 million pixels, creating images at 1280 x 1024 pixel resolutions. Speaking of images, the D-600L uses a high-quality progressive scan CCD that captures the entire image in a single pass. Meaning you get what you should get: the highest-quality film-like images without any annoying ghosting or color bias traits that often appear in competitive sensor technologies.



## THE DIGITAL CAMERA REDEFINED.



Actual dimensions of the D-600L are 4.5" (w) x 3.25" (h) x 5.1" (d). So it's easy to carry around.



### SHOOT TILL YOU DROP

Shoot, shoot, shoot. There are absolutely no restrictions on the number of photos you capture with our camera. The removable 1 megabyte SmartMedia™ card gives you up to 49 standard quality images. Simply download the images from the card to your computer by means of the serial cable or the optional PCMCIA and 3.5" floppy disk adapters. Or you can insert a new SmartMedia card anytime and keep on shooting.

### THE TTL IS VIP

A Very Important Part. It's a Through The Lens single lens reflex viewfinder so you're shooting photos as if you were looking through a 35mm SLR camera. Crisp, exact, infinitely superior images can be expected. In addition, there's a high definition LCD screen that you can use for reviewing, deleting or tagging images for printing.

### A DIRECT CONNECTION

Finally, digital independence! Now you can connect the D-600L, or any

Olympus digital camera, directly to our P-300 Personal Photo Printer. In just minutes you'll be able to print photo quality images directly from the camera.

### A FEW NOTABLES

*Note:* our more affordable D-500L also has a 3X zoom lens with an equivalent 35mm focal length of 50mm to 150mm and a resolution of 1024 x 768.

*Note:* in the last year, Olympus digital cameras have won more awards than any other digital cameras. Journalists and industry experts are already hailing our new D-600L and D-500L as benchmarks in performance and design.

*Note:* you can see for yourself how rich and sharp the images from our digital camera really are. Just visit us at [www.olympus.com](http://www.olympus.com). Or call us at 1-800-622-6372. We'll be pleased to answer all your questions.



Connect the camera to our P-300 printer and presto! Get the photo you want, when you want it.

# OLYMPUS®

THE ART AND SCIENCE OF IMAGING™







# editor's note

The iMac—a shining symbol of why Apple is on the right track.

**H**aving just returned from Cupertino for my first close-up view of the iMac, I am convinced of one thing—the iMac should have been the Twentieth Anniversary Mac. The revolutionary iMac whups Spartacus in terms of cost and performance, and it is at least a match in terms of style (see May/97, p24). But aside from the obvious differences in hardware, contrasting the Twentieth Anniversary Mac and the iMac reveals something about the way Apple worked under Amelio—and how it changed under Jobs.

Spartacus turned out to be all wrong for its role, much as Amelio did. It started out as the ultimate in elegant design—a Bose sound system, a satellite CPU-monitor configuration, a fold-out CD-ROM—but in the end, it offered few new ideas. Almost no one wanted to pay the price for Spartacus, because what it had to offer could be found in many other computers. This also describes Amelio's reign at Apple. He tried to take the same old way of doing business and make it more attractive, rather than looking at fundamental changes to Apple's business model. The result? An underpowered, overpriced company without much drive or direction, from which few people wanted to buy products because they could get rough equivalents elsewhere for less.

Moving on to the introduction of the iMac, *here's* a Macintosh with style and flare, a tribute to the original Mac in both spirit and technology. It uses a whole new motherboard design (code-named Columbus, for those who follow such things), tricked out with new and useful technology such as 100BaseT Ethernet and universal serial bus (USB) support. Both these features are crucial. With a simple \$5 crossover cable, an iMac can connect to any other Mac that has an Ethernet port. More important, USB takes over where ADB leaves

off. Users can connect up to 127 USB devices (keyboards, scanners, mice, and so forth) to the USB chain, and swap them around, all without having to switch off their iMacs.

The iMac also takes a risk by excluding dying technologies such as the floppy drive. The iMac took 10 short months to develop, which, not coincidentally, is about the same amount of time Jobs has been interim leader of Apple. In that short time, Jobs transformed the way Apple does business by introducing the Gossamer-based G3 Macintosh line, the build-to-order store, the build-to-order PowerBooks, and now the stylish—and affordable—flat-panel display. Jobs continues his winning streak with the all-new iMac, which is unlike any computer before it.

The iMac marks a new era for Apple. Press response to the iMac has been almost uniformly positive, even from traditionally Mac-unfriendly media outlets. Apple folks say they're amazed at the number of online

preorders for the iMac, and several people here at *MacAddict* are ready to put their money on the iMac, myself included. It's a great Mac, and the price can't be beat. Back in 1987, I spent \$1,300 on a new Mac Plus, and I never regretted it. Something about the classic little box transcended the sum of its OS and electronics. I suspect the same is true of the iMac—a basic price, but so much more than the sum of its parts.

The early success of the iMac also shows a change in the general press coverage of Apple. We're no longer seeing the words "struggling computer maker" attached to Apple's name in every news story as if they were part of the logo. Although it's not just the iMac turning things around—consecutive quarterly profits, strong profit margins, carefully controlled information flow, and increasing market share also are helping—the iMac is the distillation of the new Apple and the new Macintosh.—David Reynolds



## Goodbye and Hello

**E**ditor of The Disc, basketball fiend, and all-around sharpshooting Marathon deadeye Wade Albright marks this issue as his last at *MacAddict*. He'll be stopping by from time to time to check in, though, because he's still working at our parent company, Imagine Media. He took a job with our information technologies department—the good folks who help us out when we have computer problems. I know, it's difficult to believe we would have computer problems we can't solve, but just ask editor Rob Capps about swapping IDE hard drives between a G3 system and an Intel system. We'll be keeping Wade busy with constant requests for help, and with the occasional network games of Marathon, Myth, or Diablo (now that it's finally been released).

We're also bidding a sad farewell to managing editor Ruth Henrich. Although she was with us for just a few short months, she kept *MacAddict* moving along like an Eight-Ball Stout from the Lost Coast Brewery—velvety smooth. Ruth has moved on to a job at *Salon*, the online magazine, so we'll be check-

ing in to see how she's doing.

As a tremendous bonus, though, *MacAddict* welcomes two new editors: Jennifer Ho, our new reviews editor and an avid gamer, and Kris Fong, our new CD editor and an all-around quick study. Besides being a Mac fanatic, Jennifer brings her formidable twitch-gaming style and an encyclopedic knowledge of linguistics to *MacAddict*, talents which her first days have already put to good use. Kris, with her background in audio production and a great feel for the Macintosh, jumped right in where Wade left off to bring you a great CD-ROM this month, with many more to come.

Oh, and to answer Samuel Méndez: there will be an appropriate flogging for the mistaken ad on page 21 of the June issue. It advertised the upcoming *The X Files: Unrestricted Access* title as Windows only. This was a mistake; the good folks at Fox Interactive have made it clear that the game is also a Macintosh game and that the wrong ad was sent to us. There are no spies from the dark side working at *MacAddict*.

Jobs continues his winning streak with the all-new iMac, unlike any computer before it.



# Stranded Without the ESSENTIALS?

Get **CANVAS 5**, the only complete graphics and publishing solution.



➤ **D**TP in Photoshop™? **Nope.** Image editing in Illustrator™? **Yeah, right.** Industrial strength vector illustration in XPress® 4? **In their dreams.** Web publishing out-of-the-box in any of these? **Not a chance.**

It's simple; with Canvas 5, you get all the illustration, photo editing, page layout, and web publishing tools you need in one fully integrated, easy-to-use application.

Vector and raster art — create both in Canvas 5. Text editing, page layout, and graphics production — Canvas 5 can handle it. Scanning and photo editing? You can do that, too. And web work? Use Colada™, our Java™ - based publishing tool, to instantly convert any document to a web page or an entire web site.

So pack the essentials. Get your hands on a free, 30-day trial copy of Canvas 5. Call 800.622-6827 (305.596.5644) or visit our web site at [www.deneba.com/macaddict/](http://www.deneba.com/macaddict/) And if you're already convinced you can't survive without it, visit CompUSA or your favorite reseller today.

This ad was created using nothing but Canvas 5. Try *that* with any other single graphics program.

© Copyright 1998 Deneba Software. All other trademarks are the property of their respective owners. Limited time offer valid only in North America.



**NEW!** Get up to speed fast with the Canvas 5 Video Workshop Series (\$59.95 SRP each). Discover the many uses of Canvas 5 with guided, in-depth instruction.

Whether you're a graphic designer or a business communicator, you will thrive with Canvas 5!

**Corporations love Canvas because it's powerful and easy to use.**

"My employees learn Canvas first because it does so many things — I don't have to train them to use a bunch of programs."  
-Alex Mann, multimedia producer, Mann Consulting

**Illustrators and designers love Canvas for its precision and flexibility.**

"Canvas is ideal for composing graphics, text and images in one program, especially for manipulating medical drawings and photographs."  
Jamie Simon, senior illustrator, Salk Institute for Biological Studies

**Small businesses love Canvas because it streamlines workflow and ramps up productivity.**

"I used to work with four graphics programs. Now I use Canvas. It synthesizes everything in one package."  
-Bradley Touchstone, architect, Elliot, Marshall and Innes, Inc.

**800.6CANVAS**



Estimated Street Price \$399.95  
Competitive Upgrade \$149.95

Available at:  
**COMPUSA**  
THE COMPUTER SUPERSTORE





# letters

You rant, you rave, you write. We read. And chuckle.

## This Month

**WRITE TO US:** MacAddict, 150 North Hill Drive, Suite 40, Brisbane, CA 94005, or email to [letters@macaddict.com](mailto:letters@macaddict.com). **FOR CD PROBLEMS:** Go to <http://support.imagine-inc.com>. **FOR SUBSCRIPTION QUERIES:** Please call (toll-free) 888-771-6222.

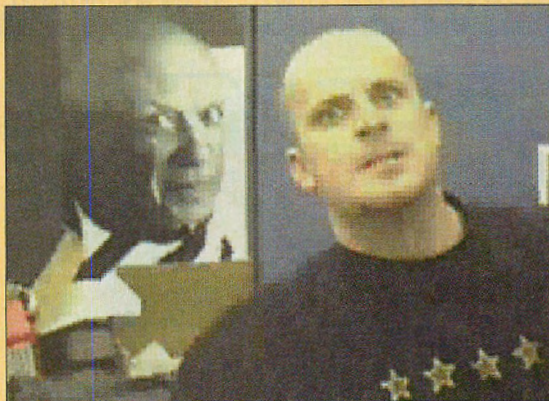
### WARNING: MAY CAUSE DEATH BY LAUGHING

When I got my May *MacAddict* in the mail, I was so excited! I came home, fixed myself a nice tall glass of chocolate milk, and sat down to read my favorite section—the letters. Now here's the problem: Some of the letters are so funny that I would start laughing with my mouth full of milk. I would inevitably end up spurring it all over the table. It could have been worse, though: 1. It could have landed on *MacAddict* and soaked through some of the pages, making them unreadable. 2. If I had tried to contain my laughter, the milk could have gone up my nasal passages and caused a severe sinus infection. 3. If it were hot chocolate or some other hot drink and I spit it out into my lap, I might have tried to sue you. So what you guys should do is put a surgeon general's warning at the beginning of the letters section. —DAVID "DA5ID" PARKER

### Do You Use Eggos?

I have to say that every month when I get the magazine in the mail, I have mixed emotions. I love getting and reading the magazine, but when it comes to putting the bundled CD-ROM into my CD-ROM drive, I have a problem. I spend a lot of time trying to decide which way is right side up when I put it in the carrier. I'm a stickler about having all of my CDs upright, and your CD has caused me to waste many hours of my valuable time trying to figure it out, when I could have been shaving my legs with a frozen waffle or singing a song to my cat, Flappy. So I would be quite happy if you would label the top of the CD in future issues to fix my problem. —JOSH MCNUTT

## TRY WORKING WITH HIM



That Prison Guy from the June CD is giving me nightmares!  
—GREGG McFARLAND

Is Prison Guy really Picasso in disguise? You decide.  
—PATRICK ROCKHOLZ



**GET ON, GET ACTIVE.** Talk to us and to other Mac addicts at the Web site.

## TRY A LITTLE SUGAR

Hey! Wait a minute. How come *my MacAddict* CD doesn't taste good? Is it supposed to taste really good, or just kind of good? Which side do you lick? Am I being ripped off? Is this some kind of benefit that only U.S. residents get? I feel left out! One more thing: why does the guy in the middle of page 12 in the May issue have blue hair? Does this mean it only tastes good if you have blue hair? —BARBARA HAGELBERG

## DON'T GET OFF THE BENCH (MARK)

In the May issue you measured the speeds of the G3 and Pentium II chips ["Benchmarks Byte," p14]. One of the tests from the *MacAddict* benchmark was a complete lap in the first race of Racing Days. You list the time as 58.2 seconds for the G3. You're so slow! I got 36.4 seconds—much better. Maybe if you sent me the full version, I'd stop making fun of your time. —BEN MAHLER

Did anyone else notice that all of the benchmarks compared the fastest G3 and the fastest Pentium II, but that there is a 67MHz difference between them and the G3 *still* competes at least neck-and-neck with the Pentium II? What would have happened if you had compared a 266MHz Pentium II and a 266MHz G3? The G3 would have smoked the Pentium II, just like in the ad. —RUSSELL HIRSH

## WE NEEDED MEMORY

OK, so I realized that I wouldn't be alone in calling one of my new 6.4GB drive's partitions "Gromit." But a week after calling another of them "Wallace," I get *MacAddict*'s June issue, and there it is on page 73. Someone's storing his or her virtual memory on Wallace. Have you people been spying on me, or are you actually using my hard drive? —MARTIN DEUTSCH

## CAT'S OUT OF THE BAG

I figured I'd tell you something about how much I love my Mac and why. But I'm sure you get enough of those already. It doesn't matter, anyway. I have an even more important message. I would just like to let you know that I have a cat. —MICHAEL PARADIS

## HE'S NOT A DOCTOR, BUT HE PLAYS ONE

Bill Avant reported that his legs fall asleep from spending too much time reading *MacAddict* while he's on the throne. Let me offer a possible solution. I believe that the problem arises as a result of pressure on the sciatic nerve. It might help to place a four-inch-high platform in front of the toilet so that your feet are elevated. This takes some of the pressure off the nerve and will probably allow you to stay there for hours. You might even consider putting your Mac in front of "The Seat," especially if you eat too many apples! —ELLIOT GIORA



## IT ALSO MAKES A HEARTY SNACK

Checking MacsBug 6.5.4a4 in the Mac OS 8 Extensions Manager reveals the following: *MacsBug is a low-level debugger. It is best served chilled with fish, hearty meats, and cheeses. Do not use while operating heavy machinery or driving a motor vehicle. Do not combine with medication.*

—TONY CHRISTNEY

## AND WE DIDN'T EVEN GET \$150 MILLION

I'm an avid Mac addict and Apple-holic. I love your publication and wait in anticipation for it each month. But recently, you've been talking about Microsoft products in a good way, when Microsoft is the incarnate of all evil in the universe! You even gave Microsoft Internet Explorer a Freakin' Awesome rating! I'm happy to say that I'd never ever put a Microsoft product on my Macintosh, not even if my life depended on it. If you haven't realized it, Microsoft is Apple's main enemy, and you're allowing, even reinforcing, this behavior by promoting and purchasing its crappy third-rate products! I'm pissed off now, thanks to you. Traitors!—BRAD PRESENTATI

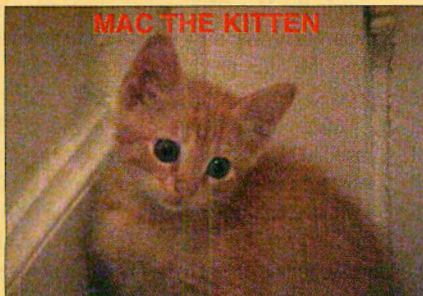
## YOU KNOW YOU'RE A MAC ADDICT WHEN...

...you never use "i.e." to abbreviate "for example" because you worry that people will think you mean Internet Explorer.

—BENNETT PRESCOTT

...you can convince your wife to let you name your new pet Mac. (Actually, it wasn't that hard to convince her. All I needed was a rag soaked in chloroform.) Presenting our newest family member, operating on OS Nine Lives, Mac the kitten.

—STEVE MORRISON



...you go to the zoo and are surprised that there are no dogcows.

...you swear you saw a Mac in *Star Wars*.

...you spend at least an hour every day making "You Know You're a Mac Addict When..." jokes.

—CRAIG RITZDORF

# STEP UP TO HARDWARE

## Windows® Compatibility

Virtual PC™ or Apple® Card  
Upgrade To Orange PC:

**\$399\***

OrangePC 620 Complete:

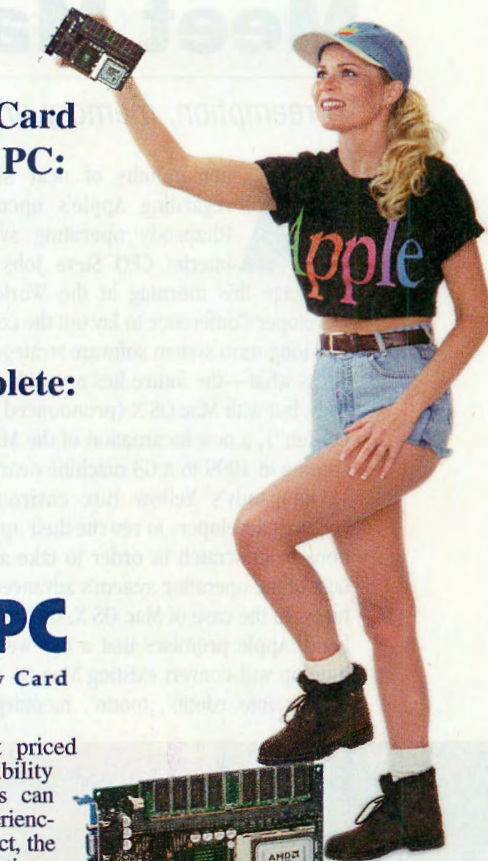
**\$499\***

**OrangePC®**  
Windows® Compatibility Card

Our new OrangePC 620 is the best priced Macintosh Windows® 95/98 compatibility solution in history. Virtual PC™ users can upgrade to OrangePC for only \$399, experiencing a giant step up in performance. In fact, the OrangePC benchmarks\*\* four to twenty times faster than sleepy software emulators.

The OrangePC 620 answers the "price/performance" question by offering true hardware speed at a breakthrough price that every Mac user can afford! It actually has a Pentium® compatible 200MHz processor (user upgradeable to 300MHz) with 16MB of real RAM (user upgradeable to 128MB) on board. This means you can run any PC application on your Mac as fast as a real PC with the ultimate in compatibility.

And the OrangePC's Version 3 software has significant improvements as well. It sports 32-bit drivers facilitating CD-ROM long file names and NDIS3 networking. Our exclusive SnapShot™ feature allows a Windows screen to show the Mac environment inside a Win 95 window and, conversely, the Mac screen to display the Windows environment. It's like a "picture in picture" on your TV!



So take a step in the right direction - upgrade your software emulator to real hardware for only \$399, or buy the OrangePC outright for \$499.

\*Introductory offer expires 7/31/98

**MacPowerhaus™**

"The Cross-Platform Connection"  
info@mph.com (800) 615-3183

\*\*Benchmark data: Business Winstone 98; Power Mac G3 with 64MB, Virtual PC™ 2.0 vs OrangePC 620, 6X86MXP200, 32MB. Virtual PC™, OrangePC, and Windows® 95 are trademarks or registered trademarks of Connectix Corporation, Orange Micro, Inc., and Microsoft. © Orange Micro, Inc. 1998





# get info

Where Rhapsody meets an untimely demise, only to be reborn again

## Meet Mac OS X (that stands for 10)

*Preemption, memory protection to be spliced into hybrid of Rhapsody and Mac OS*

**A**fter months of near silence regarding Apple's upcoming Rhapsody operating system, interim CEO Steve Jobs took the stage this morning at the Worldwide Developer Conference to lay out the company's long-term system software strategy. And guess what—the future lies not with Rhapsody, but with Mac OS X (pronounced “Mac OS Ten”), a new incarnation of the Mac OS coming in 1999 to a G3 machine near you.

Rhapsody's Yellow Box environment requires developers to rewrite their applications from scratch in order to take advantage of the operating system's advanced features. In the case of Mac OS X, on the other hand, Apple promises that a few weeks of tune-up will convert existing Mac OS applications into roo-tin', tootin', memory-pro-

how it evolved from the Rhapsody project; indications are that it builds on the micro-kernel core in Rhapsody. Like Rhapsody's Blue Box (a Mac OS—compatibility application), Mac OS X will run modern-day Mac OS applications with near-perfect compatibility, but unlike Rhapsody, it will enable developers to take advantage of the micro-kernel's features with only minimal modifications to their applications.

In order to accomplish the miracle that eluded the doomed Copland project, Apple examined the roughly 8,000 Application Programming Interfaces (APIs) that make up the Mac OS Toolbox, and scrapped 2,000 “bad APIs” that prevented the addition of the new features. The remaining 6,000, plus some additional commands to support these features, make up a leaner, meaner toolbox that Apple has dubbed Carbon (because, says Jobs, “all life forms will be based on it”). Analyzing a hundred popular Mac applications, Apple found that an average of just 10 percent of API calls are to the bad old commands Carbon excludes; that figure should make it pretty simple for developers to purge these calls from their code.

Apple estimates that the initial conversion of apps will take one to five days, plus another month or two for the usual testing and quality checking. Once an application has been adapted to take advantage of Mac OS X, it will receive all the benefits of a modern operating system: preemptive multitasking, memory protection (at the keynote, applause greeted the dialog-box message “The application

“TrashYourMac” has unexpectedly quit, but you do not have to restart your computer”), advanced virtual memory, fast networking and file I/O, and 100 percent native PowerPC code.

### What about Rhapsody?

Whither Rhapsody, which until now has been positioned as the Mac OS's successor? While Apple handed out the promised second developer release of Rhapsody at the conference and intends to ship a customer release this fall “as a server platform for publishing and Internet solutions,” it looks like Mac OS X will quickly supplant Rhapsody. As Jobs points out, the Mac OS has 22 million customers and 12,000 applications, a degree of acceptance that no other operating system but Windows can claim.

Perhaps more important in Apple's decision to create Carbon was the dawning realization that developers had little or no interest in rewriting all their applications for Rhapsody—and in contrast, Apple's major developers have given Mac OS X an enthusiastic reception. Macromedia president Norm Meyrowitz and Ben Waldman, general manager of Microsoft's Macintosh Business Unit—whose companies had expressed no interest in Rhapsody—appeared on stage to vouch for the new system-software strategy. Adobe Systems' Greg Gilley did them one better with a demo of Photoshop 5.0 running in the Mac OS X environment; since his department was busy shipping the new version, he did the conversion himself, a process that took just a week and a half.

After introducing Mac OS X, Jobs unveiled Apple's schedule of system software for the rest of the millennium. Mac OS 8 will live on through 1999, with Mac OS 8.5 (or Allegro) due later this year, followed by an 8.6 update in early 1999, then a new version code-named Sonata later that year. Rhapsody will slip out this fall.

Meanwhile, a developer release of Mac OS X will arrive in early 1999, and the shipping version is due in fall of that year. Jobs said that the new operating system will target the G3 processor Apple's current product line uses.—MS



**YEAH, JOBS KNOWS** he's bad. After all, he and his crew are succeeding where others have failed.

tected, preemptively multitasking Mac OS X powerhouses. Rather than the proverbial brain transplant, Mac OS X requires, in Jobs's words, “a little bit of evolution for a lot of revolution.”

### How It Works

At the moment, we're still waiting for details of the Mac OS X architecture and





# Apple's Unit Sales Continue to Suck Less

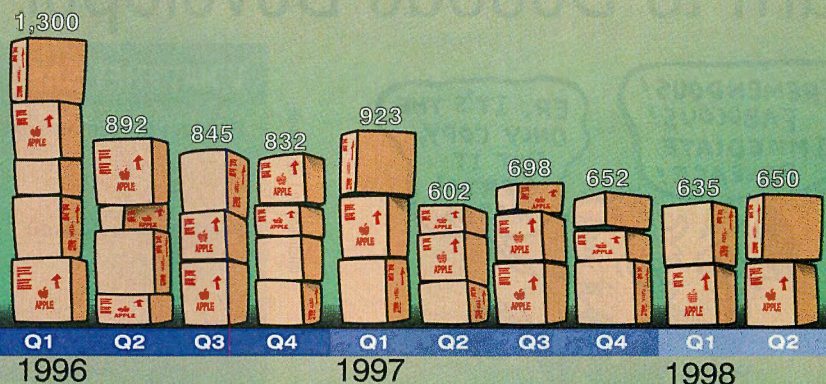
*Winning streak holds up for a second quarter*

**A**fter two successive quarters of stable revenues and consistent profitability, it looks as if Apple finally has succeeded in its two-year quest to Shrink Different—that is, not to shrink at all. With the announcement of a \$55 million profit for the second fiscal quarter of 1998 (which, as devoted Apple watchers well know, ended in March), our friends in Cupertino seem to have stanchied the bleeding. And while the numbers are pretty much in line with the previous quarter's, a slight uptick in unit sales holds out hope for a genuine rebound further down the line.

From a dollars-and-cents perspective, Apple's second-quarter results are consistent with those of the previous four quarters. Allowing for the tradition that the second quarter is usually the company's slowest, Apple's \$1.405 billion in sales compares reasonably well to the \$1.6 billion norm of the previous quarters, allowing the chief financial officer to venture the assessment that the company has finally stabilized its revenue. Meanwhile, an ongoing campaign to trim operating expenses has brought Apple's expenses down to the \$300 million mark. With a hefty 24.8 percent gross margin, the company brought in nearly \$350 million after covering manufacturing and sales costs.

These numbers don't tell the whole story, though. While it's nice that Apple has finally

## HOW THE NUMBERS STACK UP (in thousands)



Apple's unit sales are showing signs of life. The Q2 1998 sales are actually up from Q1 of the same year, (and they beat Q2 of 1997), something that hasn't happened for several years.

Illustration by Chris Vanderhoof

figured out how to balance its checkbook, an additional bit of good news lies in the realm of unit shipments. Selling a total of 650,000 computers in the second quarter, Apple not only topped the previous quarter's tally but also bettered the corresponding quarter of last year by 8 percent—the first year-over-year growth in unit sales since the halcyon days of 1995. Of these sales, 51 percent were Power Mac G3s, which despite their low, low price carry a fat, margin-boosting markup.

With a workable cash flow and essentially stable sales, Apple's next item of business is to get its business growing again. During a press

conference on the financial results, the normally reticent Anderson was uncharacteristically forthcoming about Apple's expectations for the rest of the year. For the next two quarters, he predicted stable revenue and profit margins of at least 23 percent, which should effectively guarantee profitability. But come winter, Apple is planning a bold foray into the home market, with snazzy new portable devices and whiz-bang consumer widgets. If the holiday-season product line lives up to its nebulous advance billing, Apple should have a mighty merry Christmas and a heck of a happy New Year.—MS

## HP Inks Apple Print Deal

*New printers due in a few months*

**O**h happy day! Free market economics are returning to the Mac printer market. At last there will be choice, and the return of Hewlett-Packard (a company with \$42.9 billion revenue) doesn't hurt, either. HP is coming back to the Mac with new Mac-compatible inkjet printers. In exchange for this vote of confidence, Apple began selling HP printers—the DeskJet 890CM with a network bundle and DeskWriter 694CM—to its education customers in May.

New Mac-compatible HP printer models are expected to hit the general market this summer, which provides some competition for the only other third-party Mac inkjet printer company-Epson. An added bonus

for Mac users is a version of Apple ColorSync software that works with HP printers.

Who's writing the print drivers for the new HP printer line? InfoWave, the makers of PowerPrint. Anyone who owns Power-

Print can already use PC-compatible HP parallel-port printers via PowerPrint's print driver and parallel-to-serial printer cable. The deal with InfoWave to make the print drivers makes a lot of sense for HP, because HP merely has to include a compatible serial port on its printers, or better yet, take advantage of USB, which first showed up in the new iMac. InfoWave handles the rest with its drivers.

We can infer from this development that the StyleWriter is dead. Apple has no plans to replace the current product line.—DR



## Champion of the World

*Gamers, get ready for Mac tournament*

**T**hink you have what it takes to be crowned world champion of Myth, Command & Conquer, or

Quake? Then you should attend this summer's Macworld Expo in New York. Presented by IDG Expos and managed by Double Exposure, the Macworld Expo National Macintosh Gaming Championship will be held during the show. Twenty-four Power Mac G3's will run the best multiplayer Mac games to find out which Mac gamer really is the best of the best. Admission is free, and games will be shown on big-screen TVs in a designated spectator area. To find out more, visit <http://www.macworldexpo.com/mwny98/attractions/frame.html>. You'll also find an online entry form there.—DR





## get info

## Learn to Decode Developer Speak



Illustration by Lloyd Dangle

Even when a software developer says, "Our new release is shipping! It's in stores! Flying off shelves! Available immediately!" the actual status of a new product often still seems vague. We at MacAddict Labs have translated common industry announcements so that everyone can understand them.—RC

## Did You Know

- **The expected life** of an alkaline PRAM battery in a Mac ranges from two to three-and-a-half years under worst-case conditions.
- **FireWire devices** can transfer data at speeds of up to 400 megabits per second.
- **Many of Apple's** servers are located in Houston, Texas.
- **The Apple Platinum** color is somewhere between Pantone Matching System color 420 and 421.
- **Apple has** a support professional program for serious Mac troubleshooters. Check out <http://support.info.apple.com/sp/support-pro.html> for the scoop.—DR

## WHAT THEY SAY

## WHAT THEY MEAN

## Product is "announced"

Someone at the company has an idea for a product that may come out within a year, maybe two. Or maybe never.

## Product is "released"

Engineers have finished writing the code, betas have been distributed, and confidential screen shots are leaked to the press to confirm reports of the product's existence. The company has started to design packaging.

## Company "announces immediate availability"

The company has made a round of "Gold Master" CDs, which it's testing for bugs. Boxes are being printed.

## Product is "available in stores now"

The bugs are gone from the first Gold Master, a second one is being burned and pressed, and boxes are sent off to the media with shrink-wrapped Gold Masters to further simulate actual availability.

## Company offers "special introductory offer"

The company needs money to finish development, so they have started taking pre-orders. A beta version is "coming soon."

## Company publishes glowing testimonials from users

Testimonials are direct quotes from beta testers who received the beta free and happened to say nice things about it.

## Company announces a number of units sold

Remember the "special introductory offer"?

## Upgrade is "announced"

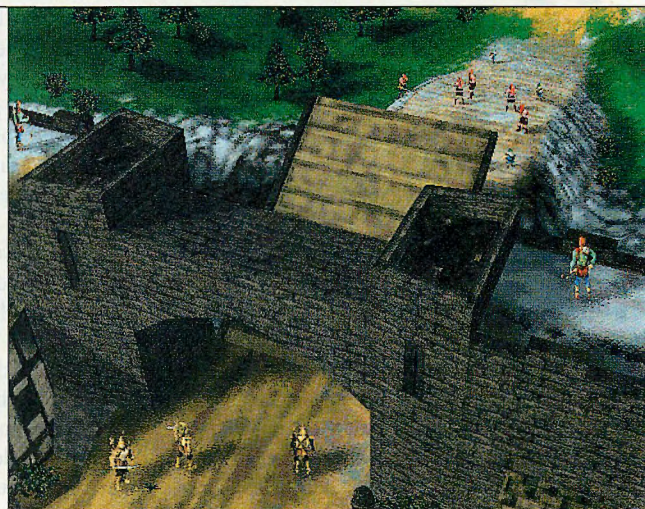
Original product hits store shelves

## Soulblighter To Get Medieval On You!

*Bungie to release Myth II:Soulblighter to the war party*

Bungie Software Products rocked the gaming world again with the announcement of Myth II: Soulblighter. Myth: The Fallen Lords was undoubtedly the best real-time strategy game of 1997 (in our humble opinion), and Myth II improves on heated single-player and multiplayer network battles with a new narrative and awesome new features.

The sequel, Soulblighter—named after our favorite fallen lord with that meaty, toothy snarl and an insatiable appetite for destruction—continues the saga of Light versus Dark in King Alric's domain. Peace is threatened, but who cares? We want full-on war. The features in Myth II will <i>enthral</i> you: a better game engine with animated 3D models, special effects such as fire, new units, higher-resolution terrain graphics, a new AI with improved path finding (finally!), indoor missions, CD-quality 3D music, and twice as many frames of animation, including multiple attack animations. Myth II will ship this year, and we can't wait to waste more time on this gem. —JH





## The MacAddict Index

Difference in price between the iMac and the Newton MessagePad 2100: \$300

Apple's U.S. market share in the last quarter of 1997, according to International Data Corporation (IDC): 3.4 percent

Apple's U.S. market share in the first quarter of 1998, according to IDC: 4.0 percent

Apple's employee attrition rate, circa July 1997: 33 percent

Apple's employee attrition rate, circa May 1998: 15 percent

### FOCUS ON: MORE PROFIT-MARGIN MATH!

Average selling price of an Apple computer in Q2 1997, Q1 1998, and Q2 1998, respectively: \$2,540; \$2,400; \$2,089

Apple's gross margin for the same three quarters: 18.9, 22.4, and 24.8 percent

Apple's approximate gross profit per Mac for the same three quarters: \$480, \$540, \$520\*

### FOCUS ON: THE VIRUS THREAT!

Number of years John Norstad published the free Disinfectant antivirus utility before giving up due to macro viruses: Nine

Sites in the NCSA 1997 Computer Virus Prevalence Survey infected by the Word.Concept macro virus: 49 percent

Virus infections reported that were macro viruses: 80 percent

Number of known Microsoft Word macro viruses as of March 31, 1998: 2031

Number of Microsoft Word documents on online editor Mark Simons's Mac: 23

Number of these infected with macro viruses: 20

\*Since Mac sales make up 96 to 97 percent of Apple's revenue, we're assuming that the gross margin for Macs is about the same as the overall gross margin. Sources may be found on the MacAddict Web site. —MS

## Macaddict's Radio Show Hits The Internet

*And you thought staff videos were gratuitous!*

Remember way back in January, when then-editor-in-chief Cheryl England ranted on about some Internet-based MacAddict radio show? Well, it's up, and every day you can fill your head with MacAddictesque tips, quips, and news blips via your connection to that World Wide Web. And since it's Internet radio, every show is uncensored and unscripted.

Each show features the very talented, yet totally untrained-in-any-way-for-radio MacAddict staff. We interview Mac industry types, look at new products, answer questions on all things Mac, and generally poke lots of fun at Cheryl. To enjoy this bandwidth hog, you'll need Real Networks' RealAudio player and the Imagine Radio Tuner, both of which are available on The Disc or are downloadable at <http://www.realaudio.com> and <http://www.imagineradio.com>, respectively.—R.C.

**THIS TUNER** is your gateway to MacAddict talk radio—provided you have an Internet connection and RealAudio installed.



THESE ARE YOUR PRESET station buttons. Press a button to tune to that station.

IF YOU ARE TUNED to a music station, a rating bar appears here. Rate the song you hear, and that song will appear in the rotation more or less often, according to your rating.

THREE TIMES A DAY *The MacAddict Hour* comes through on iTalk.

THESE ARE ALL THE STATIONS available from Imagine Radio. To load a station into your presets, simply drag it on over.

## MacAddict Micro Book Review

### ON THE FIRING LINE: MY 500 DAYS AT APPLE

AUTHOR: Gil Amelio Publisher: HarperCollins

CONTACT: <http://www.harpercollins.com> Price: \$25 (SRP)

You'd think that a memoir penned by former Apple CEO Gil Amelio would be a juicy tell-all, dripping with scandalous gossip, finger-pointing, and vengeful retaliation against those who did him wrong. But no such luck, Apple watchers. Instead, nearly a year after his abrupt elimination, Amelio hits the stands with a surprisingly personal and softhearted account of his 17-month tenure. Instead of offering vitriol and rumor, *On the Firing Line* concentrates on the thoughts and feelings of a sensitive and slightly neurotic CEO, struggling gamely to apply his abstract management theories to the worst-case scenario of a company out of control with a scheming, charismatic cofounder in the background.

Most of the stunning revelations Amelio proffers are old hat to a savvy audience. Now that we all know about Apple's mid-'96 cash crunch, the agonizing death of Copland, the high drama of the great operating-

system search, the backroom coup that toppled Amelio, and the ongoing problem of Apple's thoroughly dysfunctional corporate culture, witnessing Amelio retracing his slow process of discovery is something akin to watching a horror movie where the coed heroes merrily trot down the dimly lit basement stairs.

On the other hand, if you're up for a tour of Amelio's mind, *Firing Line* makes a breezy and entertaining read. You'll see him struggle gamely to make Bill Gates laugh, liken Steve Jobs to "an elegant jungle cat ready to spring at its prey," and gripe about Jobs taking credit for the Microsoft alliance. You'll laugh, you'll cry, maybe you'll even find yourself liking the guy. But would you take him over an Interim Evil Genius? Not likely.—MS











SYSTEM REQUIREMENTS:

16MB RAM.

100MB FREE HARD DRIVE SPACE.

A HEALTHY DOSE OF

# PARANOIA.

Find out if you have what it takes  
to enter the world of The X-Files-as  
field agent

Craig Willmore,  
assigned to assist

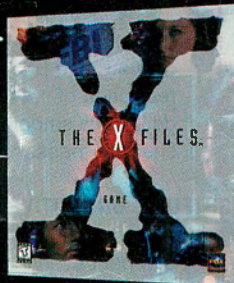
Special Agents  
Mulder and Scully in their investigation.

With multiple paths and story lines, you'll follow trails  
of clues, sift through evidence at  
crime scenes, and interview  
witnesses.

But beware,

this game contains material that may be objectionable  
to some people.

Mainly, the folks at the FBI.





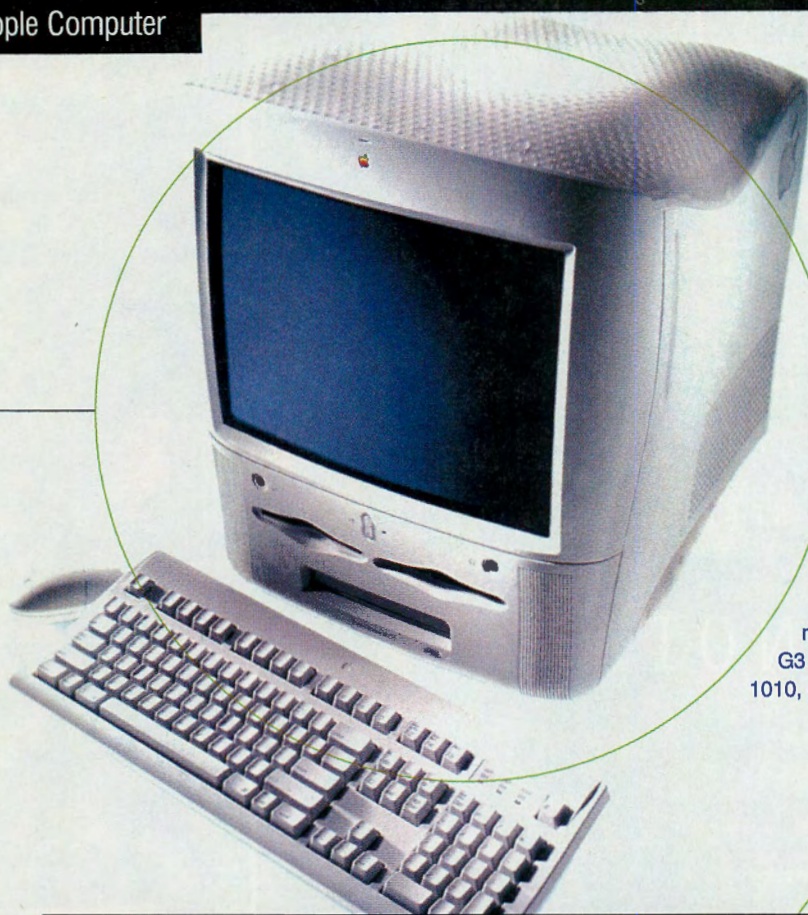


# cravings

Mirror, mirror, on the wall, what's the most coveted of them all?

## Power Macintosh G3 All-in-One

Apple Computer



**A**pple redeems itself to the education market with this winner. Now school administrators had better think twice about migrating, because the G3 All-in-one combines superior performance, elegance, and value in a space-efficient design that teachers and students will adore. They'll also love this lean machine's fixings: a G3 processor, 32MB of RAM, a 512K backside cache, a 4GB hard drive, a 15-inch monitor, a 24X CD-ROM drive, 16-bit audio, built-in 10BaseT Ethernet, and graphics acceleration. And admin-

### THE ALL-IN-ONE'S AT THE HEAD OF THE CLASS.

istrators will love the base price of \$1,499. The G3 All-in-one has dual headphone jacks, rounded corners for safety, and an adjustable tilt-and-swivel stand for students of all heights. To top it off, Apple delivers the G3 All-in-one with multimedia creation and video-editing software. G3 gets an A-plus! Call 800-800-2775 or 408-996-1010, or visit <http://www.apple.com/education/store>.

## Epson Stylus Photo EX Ink-Jet Printer

Epson

**F**or professional photographers and hobbyists alike, the Epson Stylus Photo EX ink-jet printer delivers high performance at an affordable price. Check this out! The Stylus Photo EX, a wide-format printer, cranks out pages at a resolution of 1,440 by 720 dpi in six colors. Not only are gradations as smooth as a baby's bottom, the tone is virtually continuous, thanks to Epson's Micro Piezo printhead and Super

### DELIGHTFULLY DIMINUTIVE DPI FOR PHOTO PRINTING.

Micro and Multi-Layer Dot technologies. What else? You can print everything from wallet-size images of your loved ones to 11-by-44-inch panoramas. Also, if you have an Epson PhotoPC 600 digital camera, you get direct camera-to-printer printing. That's not all, folks. The Stylus Photo EX comes with a cool software bundle including Epson's Digital PhotoLab and Spin Panorama, Adobe Photoshop, and Extensis Portfolio, and you don't even need special photo inks or paper to create your beautiful works. The ready-to-go \$499 Stylus Photo EX ink-jet printer has arrived at computer superstores near you; or you can call 800-463-7766 or 310-782-0770, or pop over to <http://www.epson.com> for more information.





# Pintel Doll

Wilson-Lewis-Wilson Design

**"N**ever hit a man when he's down," goes the saying. Nonsense! With this Pintel doll from Wilson-Lewis-Wilson Design, you can take your best stab at Intel (or "Pintel") over and over again. The evil—but delicious—satisfaction has no end. You can jinx, hex, and curse Intel and its stock by inserting pins into its precious dancing corporate symbol. Take

TRY YOUR HAND AT VOODOO ECONOMICS.

that, bunny! If that doesn't sublimate your frustrations and worries, do what Apple has been doing: take a torch to the chip maker. Included with the Pintel torture pins is a lovely matchbook. Smoke that "Pintium" inside! Usually, we at MacAddict don't condone such acts of malice, but in this case it's for a good cause. Wilson-Lewis-Wilson Design, in lieu of payment, requests that you make a charitable contribution to either the Leukemia Society of America (<http://www.leukemia.org>) or the American Diabetes Association (<http://www.diabetes.org>). For more information, call 813-785-4386, or visit Wilson-Lewis-Wilson Design at <http://www.wlwdesign.com>.



cravings

## Third-Party Extensions

(S-°)

Below and in the previous three chapters are many non-Apple extensions. If you have an item you would like to add to this list, please email me the name, version number, description and, if possible, RAM consumption figures.

• **Save the Disk (v1.4):** some Centrino/Quadra AV Plus experience excessive disk drive usage due to some of the special System and Digital Signal Processor instructions on these computers. This freeware extension will alleviate some of this disk use, making your hard drive last longer. It incorporated similar files to those found in the independently-developed AV Speedup 1.0, AV Resource Manager Tuner and AV Cache Tuner extensions.

• **Scanner (v6.7):** driver for UMAX scanners.

• **ScanTastic Access System Extension (v1.3):** scanner driver for the Epson 1200C scanner.

• **Scout's Honour (v1.1):** freeware extension designed to get you through airport security faster. When you are going through airport security and you are asked to demonstrate that your PowerBook really works, hold down the space bar during startup. You will quickly be presented with a "working" PowerBook and then a "Shutdown" dialog. Actually has three ASCII zeros at the beginning of its name to force it to load first. Note that another way to get through airport security is to leave your PowerBook in "sleep" mode and simply "wake it up" at the security checkpoint. The battery drain is minimal, and may actually be less than if you have to startup your PowerBook.

• **Screen Catcher Extension (v1.0):** part of the Screen Catcher package from St. Clair Software. Allows you to capture screen shots automatically.

## InformINIT 8.1

Dan Frakes

**I**f InformINIT didn't already exist, it would have to be invented. InformINIT, now in version 8.1, is the most informative, colossal compendium of Mac extensions, control panels, shared libraries, non-RAM INITs, system enablers, and more. It has won several awards in the past and has been translated into many languages for

MASTER YOUR EXTENSIONS AND CDEVS.

Mac users worldwide. What a reference guide for Mac geeks! InformINIT 8.1 not only tells you more than you could ever want to know about specific extensions and what they do to your Mac, but also contains updated information on Systems 8.0 and 8.1, thanks to its author, Dan Frakes. Furthermore, InformINIT requires just 1.5MB of free RAM and works on all Macs except 68000's. You can download InformINIT complete with documentation from <http://cafe.AmbrosiaSW.com/DEF/InformINIT.html> and register it via the Web for the nice price of \$15 at <http://order.kagi.com/?DF>. Support Mac shareware and gain knowledge at the same time.



FIND THE SHAREWARE InformINIT on The Disc.

## InformINIT 8.1

The Most Comprehensive Guide to System Software Available ANYWHERE



## Romulus/4

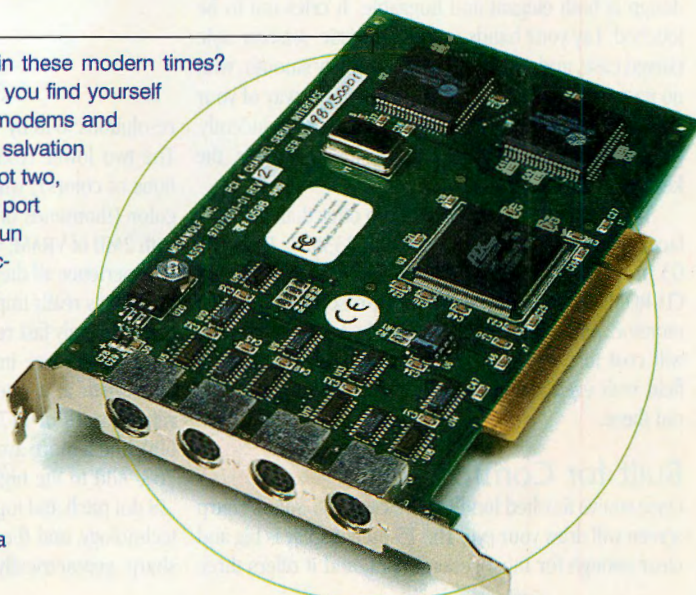
MegaWolf

**W**hy should you put up with just two serial ports in these modern times? What were those hardware engineers thinking? If you find yourself

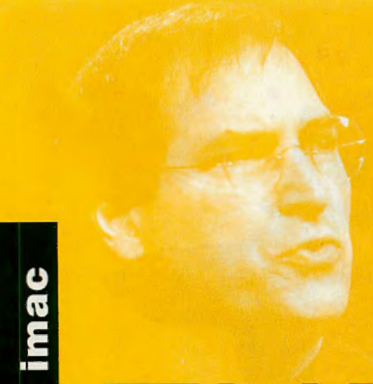
wasting time stretching your arm behind your Mac, unplugging modems and printers, and plugging in other peripherals, this PCI card is your salvation from repetitive strain injuries. The Romulus/4 gives you not one, not two, not three extra serial ports, but four omnifarious serial ports. Each port on the Romulus/4 supports 921,600 baud, and all ports can run simultaneously. You heard right! What can you plug into these Mac-standard RS-422 ports? All modems (including ISDN modems),

HAVE SERIAL PORTS, WILL TRAVEL.

CoStar label printers, Wacom tablets, Radius PressView monitors, a USR PalmPilot, GPS hardware, scanners, X-10 home control devices—serial devices galore! At \$249.98, the Romulus/4 is a deal; it includes native PowerPC drivers and support for Apple Communication Toolbox. MegaWolf also makes the Remus/2 PCI card (\$179.98), which adds two serial ports to your Mac. Romulus/4 and Remus/2 are available via online Apple resellers. Stop by <http://www.mega.wolf.com> for more info, or call 203-562-1243.—Jennifer Ho







*"It looks like it's from another planet—  
a good planet."*

—Steve Jobs, introducing the iMac on May 6

# THE iMac

**F**or years, Apple has tried to recapture the spirit of the original 128K Mac—an all-in-one computer with style, flair, and most important, mass market appeal. But the attempts have mostly failed—the original Classic had few expansion options right when expansion options were hot; the Color Classic, while expandable, competed too closely with the LC; and many of the models in the Performa line were seriously underpowered. In a bizarre twist of fate, it's taken the return of Steve Jobs—Apple cofounder and the visionary behind the original Mac—to fashion its glamorous rebirth, the iMac.

A tribute to the Apple sense of style, the iMac's design is both elegant and huggable. It cries out to be touched. Lay your hands on the futuristic, *Jetsons*-style curved case, and you'll find it's completely smooth, with no nasty seams or Torx screws to get in the way of your caresses. Every inch of the iMac gleams translucently, providing taunting glimpses inside the computer, the keyboard, and the mouse.

Yet this new Mac has far more to offer than just surface good looks. It packs a powerful 233MHz PowerPC G3 processor, 32MB of RAM, a 4GB hard drive, a 24X CD-ROM drive, and a sharp, high-resolution 15-inch monitor. And when it ships in early August, the iMac will cost just \$1,299—a price that levels the playing field with even the most powerful Pentium-based PCs out there.

## Built for Comfort

Once you've finished fondling the case, the iMac's sharp screen will draw your eye. The 15-inch display is big and clear enough for most general uses, and it offers three

resolutions: 640 by 480, 800 by 600, and 1024 by 768. The two lower resolutions support 24-bit color (millions of colors), while the highest one supports 16-bit color (thousands of colors). Although the iMac comes with 2MB of VRAM, you'll need another 2MB if you want to experience all the joys of 24-bit color at 1024 by 768.

What's really impressive about this screen, however, is its blazingly fast refresh rates, which result in a rock-solid, flicker-free image. While most monitors refresh the screen at a rate of around 75Hz, the iMac offers refresh rates of 117Hz at 640 by 480, 95Hz at 800 by 600, and a more average 75Hz at 1024 by 768. Add to the high refresh rates a fine .28 dot pitch and top-notch shadow-mask technology, and the iMac has one stable, sharp, geometrically precise monitor.



# Why You'll Love It

The smooth, curved plastic is free of unsightly seams.

The carrying handle in back lets you lug the 40-pound iMac easily from here to there.

Apple calls the turquoise color "Bondi Blue" after Bondi Beach, the hip surfing spot near Sydney, Australia.

The white color is appropriately named "Ice."

The motherboard is cozily tucked out of the way, under the monitor. Simply undo one screw to pull it out.

There's easy access to all ports from the side—no more nasty fights to connect stuff to the back of your Mac.

The turquoise foot adjusts the viewing angle of your iMac.

The sharp, high-resolution 15-inch screen breaks new ground with its superhigh refresh rates.

Look—two headphone jacks on the front!

Power on from both the keyboard and the front of the monitor.

The translucent keyboard with its inverted-T arrow keys is designed with gamers in mind.

The translucent mouse rolls via a color-coordinated turquoise mouse ball and offers precise movement.

Tear your eyes from the screen and you'll be tempted to toy with the iMac's saucer-shaped mouse. It looks different, and it works better. Apple has taken great pains to give the mouse more-precise movement. No longer do you need to roll the mouse off its pad and halfway across your desk to speed the cursor across the screen. Smaller mouse movements and quicker clicks make working on your iMac that much more pleasant.

But that's not all Apple has done to make the iMac a joy to use. The iMac's turquoise-colored foot tucked underneath lets you adjust its viewing angle. A similar foot under the keyboard lets you tinker with your typing angle. On front of the

machine are two stereo speakers that blast out surround sound, as well as two headphone jacks (especially great for schools where kids share a single Mac). And, glory be, Apple has conveniently placed all of the ports on the side—not the back—of the iMac. Finally!

## Know the Guts, Know the Glory

Sure, the iMac looks cool on the outside, but that's not all there is to this little Mac. Its insides also sport some clever engineering. And it has to—the translucent case forced Apple engineers to make sure the iMac's insides were as well designed as its exterior. They even made its interior easily accessible: simply remove one screw from the back of the case, and the motherboard slides smoothly out.

The iMac's motherboard boasts a completely new design. A tiny plug-in daughterboard attached to the top of the motherboard contains the PowerPC G3, the L2 cache, and the RAM cards. To ensure the system's overall quickness, Apple has matched the 233MHz processor with a fast 66MHz system bus and

512K of backside cache. These critical components ensure that data flows through the system as fast as the processor can spew it out.

The included 32MB of RAM is socketed onto the face-down side of the daughterboard, while a slot for adding an additional DIMM sits on the other side. You can put any size DIMM up to 64MB into the empty slot, giving the iMac a total of 96MB of RAM. If you really need more RAM, you can remove the iMac's original 32MB DIMM and replace it with a 64MB DIMM for a total memory capacity of 128MB.

Looking more closely at the motherboard, you will notice that only a few Macintosh ROM chips remain. (ROM chips contain a common set of instructions that applications need to run under the Mac OS). Most of the remaining instructions are stored in RAM or loaded onto the hard drive. Fewer chips mean a cheaper Mac.

One chip that Apple did add to the iMac's motherboard is ATI's Rage IIC. This chip provides 2D, 3D, and video acceleration. Unfortunately, the chip accelerates Apple's own 3D Rave technology (which very few games use)

**CAN'T WAIT TO GET YOUR MITTS ON AN IMAC?** For now, you'll have to settle for filling out a form on Apple's Web site to request more info. (At <http://www.apple.com>, go to the Apple Store and keep clicking on the picture of the iMac—you'll get the form eventually.) When the first units ship in August, you'll find display units at local dealers and CompUSA stores.



and it doesn't do 3D effects (which many games do use). The big bummer for hard-core gamers is that they'll never be able to get good 3D effects playing games on today's iMac because it has no PCI slots for 3D effects cards—in fact, it has no PCI slots at all.

Clustered at the edge of the motherboard are the iMac's ports. There's a connector for the internal 33.6-kbps modem as well as 16-bit audio in and out connectors (great for hooking up big, loud speakers). Apple has even included 10/100BaseT on the iMac—this fast, modern Ethernet connector is quickly becoming the standard not only in offices, but also in schools and homes, where the iMac should gain rapid acceptance. If you have a Mac you want to network with the iMac, you can hook them together via an Ethernet network. If the Mac you want to network has no Ethernet, you'll need a LocalTalk-to-

Ethernet bridge. (See "Hook Up Your Macs With Superfast Ethernet," *MacAddict*, Nov/97, p50.)

Finally, there's a connector that will be unfamiliar (and a bit scary) to most Mac enthusiasts: the USB (universal serial bus) connector. The iMac sports two USB ports in a panel on the side of the machine; it's through them that you'll hook up peripherals such as printers, scanners, and removable storage drives. But just because USBs are different doesn't mean they're bad. This change can be good for three reasons. First, you can hook up 127 devices (yup, that's what we said, 127) via USB if you use a hub—and the iMac includes a USB hub in the keyboard, which you'll need to hook to your iMac to use peripherals other than the keyboard and mouse. (This may change when Apple ships its mind-controlled Mac OS, but we have no real thoughts on that.) Second, USB devices are hot pluggable, meaning

you can connect or disconnect them without having to turn off your Mac. Third, USB is quickly becoming a standard on Wintel PCs. All Wintel peripheral vendors need to do is write a Mac driver in order for their peripherals to work on the iMac. This should give iMac addicts plenty of choice in peripherals.

## Hit or Missing?

The iMac is striking not only for what it *does* include, but also for what it *does not* include. Look around. Don't see a floppy drive, do ya? No SCSI connector either. No PCI slots. No second monitor. No AppleTalk.

We know what you're thinking—how can we rave about the iMac and then tell you that all this stuff is *missing*? Has Apple lost its collective mind? Is my iMac stranded on its own little information island?

Calm down. Everything will be okay. For starters, Apple says that inexpensive adapters should be available to allow your current SCSI and serial devices such as printers and scanners to hook up to the iMac's USB port. Second, within minutes of the iMac announcement, Imation (888-466-3456, <http://www.imation.com>) stated that its SuperDisk drive will be available with a USB connector for the iMac. The SuperDisk works with 120MB SuperDisks as well as 1.44MB and 720K floppy disks. We're sure that other vendors will follow suit with USB peripherals and storage devices for the iMac. And don't forget: USB is a standard from the PC world, so the weight (and size) of that market will

bring forth lots of great USB devices for Mac.

We also firmly believe that even if no one created an external floppy drive for the iMac, you'd still be fine. Granted, Steve Jobs and his crew at NeXT tried to ship the original NeXT cube with only a CD-ROM drive—an experiment that was a miserable failure. Still, that was 1988, when CD-ROM drives were more curiosities than everyday occurrences.

Flash forward to today. When was the last time you actually used a floppy disk? Even if you've used one recently, we'd bet there was another way you could have retrieved the information on it. For example, you can purchase a simple \$4 crossover cable from Radio Shack that lets you connect two Macs via Ethernet and share files. Alternately, you can use the Internet to transfer files. And most of today's software comes ready to install from a CD-ROM, which you can handle with the iMac's speedy built-in CD-ROM drive. In addition, the iMac includes an IRDA transceiver that, while of little practical use currently, could eventually provide a way to beam information between the Mac and various peripherals. Clearly, the floppy's days are numbered, and we don't mind a bit that Apple is shooting to kill.

## Apple's Secret to Success

The iMac is the first Macintosh to come entirely out of Steve Jobs's tenure at the helm of Apple. The project was conceived last summer when Jobs took over; the whole production took a mere 10 months from start to finish and was kept so tightly under wraps that its announcement came as a total surprise, even to the majority of people at Apple. (Apple claims that the day before the announcement only about 100 people knew about the iMac. It was kept so secret, in fact, that Apple did not even prepare brochures and specification sheets for the press).

The surprise has been a particularly well-managed one. The new iMac perfectly targets the consumer, from its inspired case to its powerful specifications. It doesn't risk eating away at sales of Apple's higher-end, more expandable G3-based Power Macs, which are geared toward professionals. At the same time, the iMac has given analysts, consumers, and developers brand-new confidence in Apple. Here's a machine that is tightly focused, well designed, competitively priced, and perfectly timed to increase sales to consumers during the all-important fall and winter buying season (and thereby increase the Mac's market share, which is good for all of us).

With the iMac, Apple is once again showing the spark, drive, and focus that we've long associated with the company. And for that, Apple, we thank you. ■

**Cheryl England has used Macs since 1984. The iMac is the coolest Mac she's seen since the Mac Plus. Or the Mac IIfx. Or the Quadra 840AV. Or the PowerBook G3...**

# MAC to MAC

Steve Jobs is back and so is the Mac, but Apple's latest reinvention of its flagship computer is no mere flashback of eighties retro chic. Check the specs and you'll find that the Mac's come a long way, baby.



### 128K Mac (circa 1984)

First personal computer to use a mouse

Breakthrough high-resolution 9-inch black-and-white screen

All-in-one form factor

Modern, innovative design

Bundled software—MacWrite, MacPaint, the Finder

8MHz 68000 processor

AppleTalk, no Ethernet

Weighed 16.5 pounds

Design and marketing driven by Steve Jobs

Floppy drive

No connectors for external storage

No hard drive

Carrying handle

128K of memory, not expandable

Mono 8-bit sound out; no sound in

Sold for \$2,495 list at introduction

### iMac (circa 1998)

New, improved mouse with more precise movement, rounder design

Breakthrough high-resolution 15-inch color screen

All-in-one form factor

Modern, innovative design

Bundled software—Mac OS 8.1, AppleWorks, America Online 4.0, Microsoft Internet Explorer 4.0, FileMaker Pro 4.0, Quicken Deluxe, plus others to be announced

233MHz PowerPC G3 processor

Ethernet 10/100BaseT, no AppleTalk

Weighs about 40 pounds

Design and marketing driven by Steve Jobs

24X CD-ROM drive, no floppy drive

Two USB ports

4GB hard drive

Rounded carrying handle; provides better weight distribution

32MB of memory, expandable to 128MB

16-bit sound in and out

Sells for \$1,299 list at introduction



# Spiffy Summer Savings!



**Summer Means Hot Days and Hot Deals from FWB Software ...**

**Get CD-ROM ToolKit™ And Hard Disk ToolKit-PE™ for As Low As \$39.95!**

Supercharge CD-ROM performance with FWB's "Spiffy-Rated" CD-ROM ToolKit™ and simplify all your storage management needs with Hard Disk ToolKit Personal Edition™.

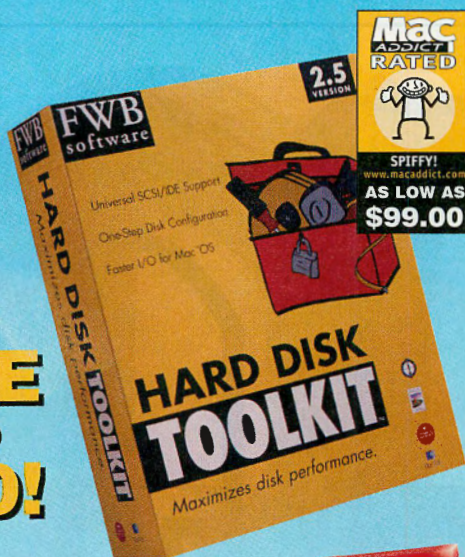
Promotional bundle includes Hard Disk ToolKit-PE 2.5, CD-ROM ToolKit 3.0, and \$10 mail-in rebate. Savings based on MSRP, actual price may vary. Rebate expires 30 days from purchase date.

**SAVE UP TO \$100!**

**OR ... Get Hard Disk ToolKit™ for As Low As \$99!**

Get maximum performance and reliability from all your drives with FWB's "Spiffy-Rated" Hard Disk ToolKit™ 2.5. Now with HFS Plus support, bootable crisis CD-ROM and more!

Savings based on MSRP. Actual price may vary. \$25 in-box rebate expires 30 days from purchase date.



**SAVE UP TO \$100!**

**Order Online or From Your Favorite Catalog Today!**

**FWB**  
software

www.fwb.com

**CYBERIAN** Outpost

www.outpost.com

**Mac** WAREHOUSE

1-800-255-6227

**MacConnection®**

1-800-986-2289  
SOURCE: FWBM1

**The Mac Zone**

zones.com™

1-800-711-4335





110110101101011101101010101010100010110100001

hack mac

101101000101011101011010010110  
010101101110001101101011010111



FIND RESEDT  
AND A DEMO  
of Resorcerer  
on The Disc.

# hack

# your

# mac



**U**sing a Mac is child's play. Even PC users know that any sissy with a brain and a keyboard can use his Mac right out of the box to scribble letters, doctor photos, tinker with HTML, and piddle away time cruising the Web. But it takes a devilish mind with some mighty big trackballs to delve into the very depths of the Mac's code and wreak havoc with its resources.

If the devil on your shoulder has been prodding you to hack your Mac but the angel of reason keeps holding you back, it's time to give the devil his due. We'll show you how to use Mathemæsthetics' powerful Resorcerer to wrestle control from resources and force your Mac to take on personalized startup screens, customized menus, hilarious sounds, and more.

But all you code crackers out there would be wise to back up before you hack up your system and only make changes to copies of files. Careless hackers can crash their Macs and invite the kind of ill will that would give Lucifer the chills. Take the proper precautions, however, and nothing can stop you from transforming your mild-mannered Mac into a monster all your own.

**By David K. Every**



# Resorcerer REVEALED

**N**ovice hackers who just want to fiddle a little with their STRs and PICTs can stick with Apple's freebie resource editing program, ResEdit. But serious troublemakers, budding programmers, and customization addicts will want to cast their spells with Mathemæsthetics' Resorcerer, which is more powerful, more accessible, and more expensive. Since Apple dropped the ball on ResEdit (the program's last update was about four years ago), more Mac hackers have turned to Resorcerer for the tools necessary to crack Apple's latest System software. Unlike ResEdit, Resorcerer lets you search resource files for text matches so you can find resources by content (such as which control has the title

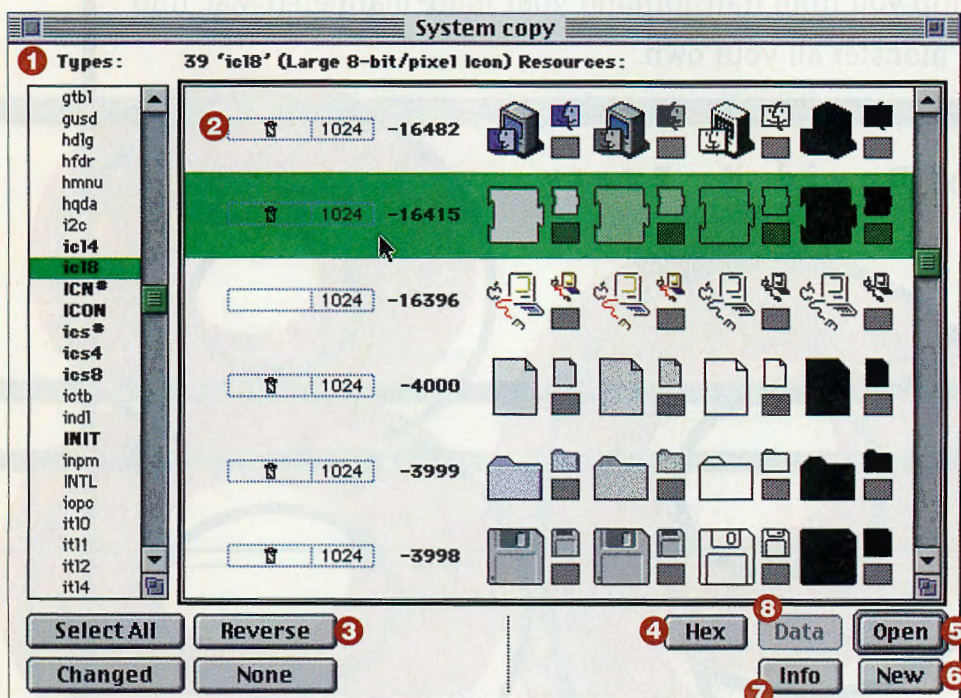
Eject in it); or it can compare two resource files and show you what's different between them (such as being able to see where a new game score might be stored); and Resorcerer handles many more and much larger types of resources, such as those for the Mac OS 8 Appearance and QuickTime.

Resorcerer will set you back some bucks because it's usually priced for professional developers. But, in an attempt to lure the more casual hacker, Mathemæsthetics has lowered the price when you order Resorcerer direct from its Web site. For more details, you can check out Resorcerer on The Disc, or head to <http://www.mathemæsthetics.com/macaddictinfo.html>.

**1.** The Types list shows a list of all the resource types available to edit in your open file. The ones in bold come with custom editors that let you perform more detailed hacks when the resource is selected.

**2.** The Resources list shows all the resources of the selected type that can be opened and edited for that particular file. To help you see what's what, the Resources List usually tries to show you graphic representations of the resource data. For MENUs, it shows the start of the menu; for icon families, it draws the images of all the icons in one place; for STRs, you see the actual text.

**3.** Reverse selects everything except what was selected. The Changed button selects anything you've worked on but haven't saved yet.



**6.** Selecting "New" creates a new resource of the type selected. Most casual hackers won't need to create resources from scratch.

**7.** The Info button allows you to set a resource's attributes—info such as ID numbers, names, and loading specifications. You shouldn't hack resource attributes unless you really know what you're doing or you risk harming your system.

**8.** The Data button opens your resource using a special data editor that shows you the data structures the programmers used to describe and build the resource. This is a long list of numbers, strings, colors, and other stuff, all packed together.

## Getting Started

Tap into Resorcerer's magic and start editing. To get going, all you need to do is:

- 1.** Fire up Resorcerer and open a file you want to hack.
- 2.** Select the resource type you want to edit from the Types list.
- 3.** Select the resource item you want to hack from the Resources list.
- 4.** Start hacking. Remember that none of your hacks will take effect until you save, unlike with ResEdit, which makes you edit all your hacks directly to the hard disk. Still, it's always a good idea to edit copies of files and make backups of everything before you start.

## Holy Resources!

Resources are programming instructions that tell your Mac how to create common features such as pictures, sounds, and text. Although more hard-core code lies tucked away in data forks that are off-limits to the average tweaker, Resorcerer treats the data fork of your file as just another (sometimes really large) resource.

And you've got a ton of resource types to choose from, ranging from PICTs to cicon's to STR#'s. We'll take you through some of the more popular resources and show you how to make them your own.

**4.** The Hex button opens a hex editor that lets you get at a resource's raw byte data. Hacking hexadecimal is always the least pleasant option. You can edit any resource data as hex, but you usually don't want to, because it's hard to tell what the data's for.

**5.** The Open button opens a resource's data for editing using the best method it can. It also opens any special-purpose editors that apply to the resource. If it can't find a dedicated editor, the Open button acts like the Data button. And if the proper data structure isn't known, the Open button acts like the Hex button. You can open a file the usual way with the Open File command, or you can use Resorcerer's way-cool File System Browser to search for and open any file (including invisible ones); just double-click on any file to peek inside.



# The PICT

**P**ICTs, or pictures, are among the most commonly hacked resources, if only because they're so darned abundant. Why did the hacker tweak the PICT? Because it was there. Duh. Almost every graphic in the Mac that is larger than an icon (about the size of a dime) and even a few that are smaller are PICT resources. You'll find them lurking everywhere: the startup screen, logos, palette buttons, and in most respectable About boxes.

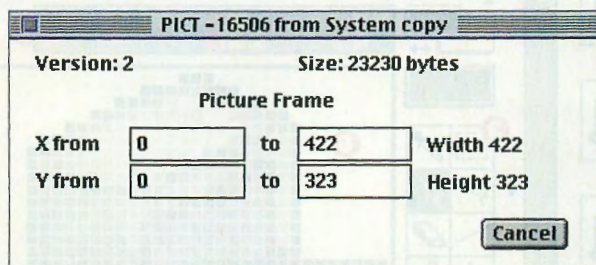
## The Hack: Your Startup Screen

Power up your Mac and the first thing you hear is a pleasant *gong* followed by an image of the Mac OS happy face with the salutation Welcome To Macintosh pasted below it. This startup screen is a PICT that's stored in your Mac's System file. Here's how to replace that image with one of your own.

1. Make a copy of your System file and then open it with Resorcerer. Remember that no changes you make to the file will take effect until you save your work. From the list of types, choose PICT and scroll down the image list to image -16506. This is the large, 256-color startup screen.

Other pictures look similar to the startup screen; for instance, -16501 to -16503. These are different sizes (for monitors smaller than 13 inches) or different color depths (for black-and-white or grayscale monitors) and are seldom used anymore.

2. Open the resource with the Open button and paste your image on top of it. Double-click on the image you're replacing, and Resorcerer will give you its measurements. (Pictures always work best if the replacement image is the same size as the original.) Even better, if you'd rather not crunch the numbers, you can copy any image—for example, something you've put together in a paint program—directly from the screen using the Copy From Screen command in the Picture menu. Resorcerer's Hide File Windows command can help reduce screen clutter during a screen copy.



3. Save your changes. Drag your original System file out of the System Folder, rename the System copy to System (it should still be in the System Folder), and restart your machine. You can admire your work each time you reboot.

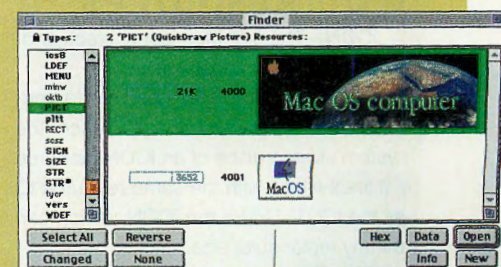
**THIS PARTICULAR STARTUP SCREEN** can be found on the MacAddict Web site in our Art Gallery. The masterpiece is a creation of reader Ben Hays.

## Ready Images

Check out the following Web sites for links to cool backgrounds you can use in your own startup works of art.

<http://www.macaddict.com/gallery>  
<http://members.aol.com/desktop/index.html>  
<http://www.transbay.net/~niko/Mac>  
<http://www.iconfactory.com>  
<http://www.magpage.com/~toastman/moss/graphics.html>  
[http://www.kindground.com/gui\\_junky/index.html](http://www.kindground.com/gui_junky/index.html)

## Extra! Extra!



Designing your replacement PICT is probably the hardest part about hacking picture items—if you can copy and paste, you've basically got the process down. For yet another PICT hack, try replacing the world you see when you select About This Computer from the Apple menu in the Finder. Just make a copy of the Finder, open it with Resorcerer, and replace PICT 4000 with a picture of your own. To try it out, just drag your original Finder out of the System Folder, rename the Finder copy to Finder (it should still be in the System Folder), and restart your machine.

Or here's an even cooler hack you can do only with Resorcerer. Open the original PICT 4000 with the Data button instead of the Open button. This lets you view the picture's many data fields (don't get flustered, there are a lot of them). You'll see a long list of all the shades of colors used in the picture of Earth. Scroll down to the end of the list, and select the blackish second-to-last color field just under the label Color Specs #255. Click on the Edit button, then click on the Set button to change the color from almost black to your favorite fiery shade of red. Close the windows and save the changes. This hack makes Earth in the About box look like something out of a *Star Trek* movie.





# The ICON FAMILY

**A**ny graphic that isn't a PICT is an icon. Icons really are nothing more than small, fixed-size pictures and for all practical purposes can be treated as such. Icons are used to represent drives, folders, applications, and files; they also show up as small pictures in dialogs, menus, and sometimes buttons.

Although you can create your homemade icons in another program and just paste them in, as with PICT resources, you also can fashion your icons with Resorcerer's icon editor. If you've used an image-editing program, the icon-editing tools should look familiar.

## Icon Resources

**ICON**—The first Mac icons, black-and-white and high on nostalgia.

**cicn**—A complete, self-contained, "paintable" color-icon image, which the system uses in place of an ICON resource if it finds a cicn with the same resource ID as the ICON. Unlike the ICON, a cicn can be any rectangular size.

**ICN#**—Both a black-and-white, large, 32-by-32-pixel icon, and a mask that tells the System which pixels are affected when it draws the rest of a large icon family. Most new Macs no longer offer a black-and-white mode, but all the Mac systems still use the mask image to "trim" the image.

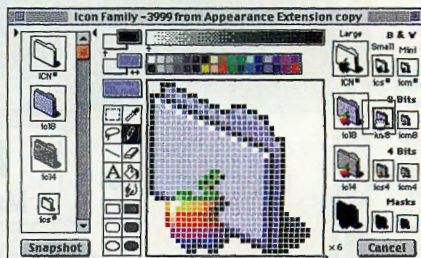
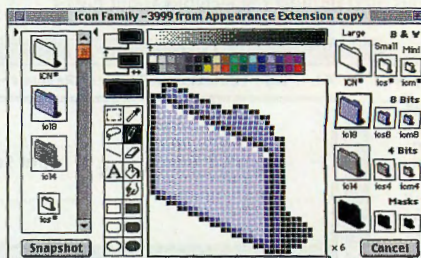
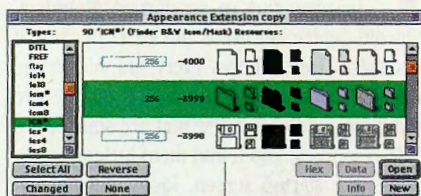
## The Hack: The Empty Folder

Mac OS 8 (and beyond) uses an Appearance Extension to give icons a 3D look. We'll show you how to transform all your normal, plain-Jane folder icons into small 3D apples in one fell swoop by changing the Appearance Extension. If you're using an earlier version of System software and don't have an Appearance Extension, then you can do the same steps to the System file.

**1.** Make a copy of the Appearance Extension, which is in the System Folder inside the Extensions folder; and open the copy with Resorcerer. Select the ICN# resource type and then select ID -3999, which is the generic folder icon. Double-clicking on that icon family fires up Resorcerer's icon editor, which you can use to touch up or paint your own icon.

**2.** Change the icon either by using the painting tools provided or by pasting a picture over it. To make your icons look good, you have to edit each size in the family. You can save some time by dragging your new icon onto the other icons and letting Resorcerer size it for you, though some touching up is always necessary. Make sure to update the black-and-white mask if you change the icon's outline.

**3.** Save your changes, drag your original Appearance Extension to the Trash, rename the Appearance Extension copy to Appearance Extension (it should still be in the Extensions folder), and restart your machine. After your Mac has rebooted, the new folder will replace all your normal empty-folder icons.



**1.** The gradient area lets you set shades and patterns. You can pour a color or pattern into various areas, then hold the shift key down and repaint with a new color by clicking and dragging the mouse over any palette area.

**2.** For icons used by the Finder, stick with the standard 34 recommended colors in the editor's palette to be sure that colors stay the same at all color depths.

**3.** The painting tools edit the display area and work just the way you'd think they would. You can use the lasso tool to select any part of the icon. To select background areas, hold the command key down with the lasso. To select disconnected areas, hold the shift key down also.

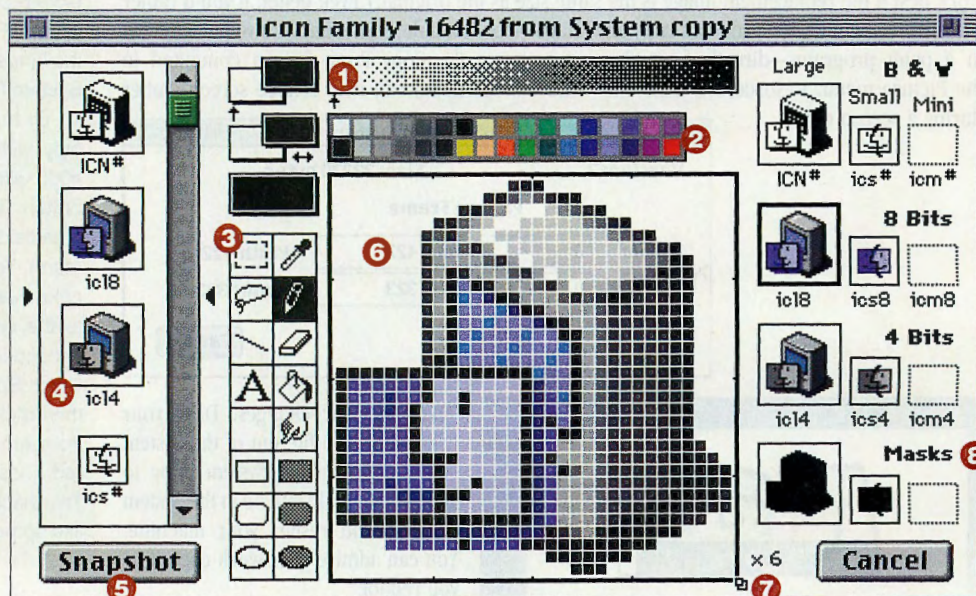
**4.** Actual Size view shows the actual size of each icon or cursor.

**5.** The Snapshot button remembers the previous version of an icon and lets you revert to any snapshot you've taken; just tap the spacebar while you're working.

**6.** The display area is where you edit your cursors or icons.

**7.** Drag the tiny grow box to make the display area larger, or click in the window's zoom box.

**8.** The masks show you which parts of your icon are transparent and which parts are solid. The white area shows through to your desktop, and the black area is what you want to paint.





## The File Info

Type:	APPL
Creator:	Doug

A file's type and creator aren't resources, but you can hack them with Resorcerer to change a file's personal info. Using the resource editor, select File Info from the File menu, and you'll have access to the file type and creator codes, which tell a file all about itself. File type uses four-letter abbreviations to fill your System in on what type of file it's dealing with; for example, an APPL is an application, TEXT is a text file, MooV represents a QuickTime file, INIT is an extension, and cdev stands for control panel.

File creator, on the other hand, uses four-letter abbreviations to tell the Finder what kind of program created the file and which program it should run whenever you open that file. For example, when you click on a Microsoft Word document, it's the file creator that tells your System to fire up the infamous application.

**1.** Created and Modified dates indicate when the file was created and last modified.

**2.** File Protect was used for copy protection, but it isn't used much anymore.

**3.** Finder Flags and Map Flags give the Finder information about the file so that the Finder can display and work with it correctly.

**4.** Label lets you set the Finder label and color; you know, like Essential or Hot or Personal.

**5.** File Locked prevents others from changing the file while it's locked. You can turn this on or off from the Finder by doing a Get Info on a file to call up a check box.

**6.** File Busy tells the Finder that the file is in use and that others can't use it.

## The Hack: The File's Creator

Imagine we have a text file saved by Microsoft Word. We want to change the file's creator so that when we double-click on the file, SimpleText will open it instead. Here's how:

**1.** Find out the creator code for SimpleText by opening up a SimpleText file with Resorcerer and selecting File Info from the File menu. This tells us that the creator code for a SimpleText document is txtt (because this program was first called TeachText). Close the document.

**2.** To change the Word document's creator code, you also need to know the creator code for Word. Do this by opening a Word file with Resorcerer and selecting File Info from the File menu.

**3.** Select Word's creator code and replace it with txtt. Be careful to use the right case and spelling. Save your changes and quit. Now the Word file is a SimpleText file, and SimpleText will launch whenever you click on the edited file. Hacking creator code is useful because you can apply it to all sorts of files. It is important to remember, however, that the hack works only if the application can read the file type.

### Tip

If you change the SimpleText creator code from txtt to ttr, you'll make the text file read-only.

## Extra! Extra!

QuickTime 3 recently came out and is available at <http://www.apple.com/quicktime>. If you haven't yet upgraded to QuickTime 3 Pro, then you'll keep getting a file on your desktop reminding you that you can. A simple hack lets you render these Finder flags invisible, even though they're still there.

- 6. File is shareable appl.
- 7. File has no 'INIT's
- ✓ 8. Bundle has been recorded
- 9. File is a letter
- 10. File has custom icon
- 11. File is stationery pad
- 12. File name is locked
- 13. File has a bundle ('BNDL')
- 14. File is invisible
- 15. File is an alias

To invoke invisibility, open the Get QuickTime Pro file with Resorcerer and choose File Info from the File menu. Set File Is Invisible from the Finder Flags menu. (This is more effective than deleting the file, because programs that use QuickTime would keep adding it back just to remind you.)

Save your changes and quit. That annoying file won't bother you anymore.



# The CURS

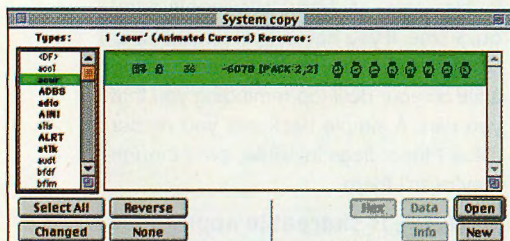
**T**he cursor works hard. When you move it over text, it becomes an I-beam. When you're forced to wait, it transmogrifies into a wristwatch to let you know you'll have to wait. It can even shape-shift itself into a pencil or magnifying glass to show you what action to expect when you click the mouse in other programs. All of this work and only three types of cursor references to get the jobs done.

## The Hack: Your Animated Cursors

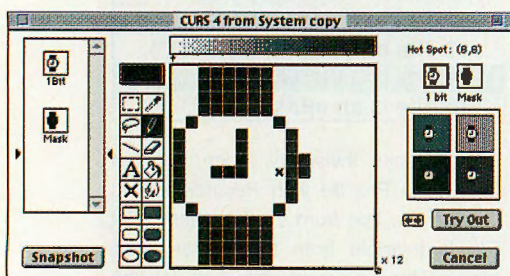
An animated cursor (acur) is really just a list of many cursors that make up an animation sequence. When you open up the watch cursor (CURS), you may notice that there are many such watch cursors (ID 2400 to 2406), each with the minute hand in a slightly different position. The Mac cycles through those cursors to make the watch appear animated.

To change the cursor's motion, you can edit each of those CURS separately, or you can edit the acur, which contains a list of the cursors in sequence and supplies you with a special control to increase or decrease the animation speed. We'll change the acur for the watch.

**1.** Create a copy of your System Folder and open it via Resorcerer. Then select the acur type with the ID -6078.



**2.** Open the acur, and Resorcerer supplies you with a special acur sequence editor. Open the first cursor icon (the watch) in the sequence.



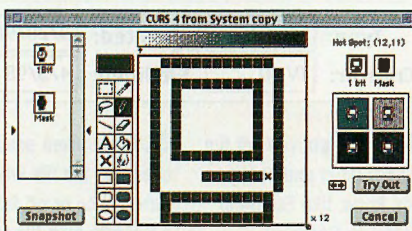
## Cursor Resources

**CURS**—The first Mac cursor, just plain old black-and-white.

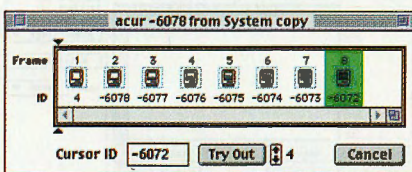
**crsr**—A newer, color cursor that's only rarely used in programs. However, hackers with an eye for color can replace the CURS with a crsr with the same ID, and the Mac will automatically use the color one.

**acur**—An animated cursor that's really just a list of many CURS's (or crsr's) to define a sequence of animation.

**3.** Edit the cursor—we turned ours into a little Mac. While you're drawing, remember to keep an eye on the final image at its actual size to keep your perspective while you're zoomed in.



**4.** Select and tweak each cursor in the acur sequence until you've perfected the animation. (We made the little Mac's screen slowly fill up.) If your cursors are in numerical



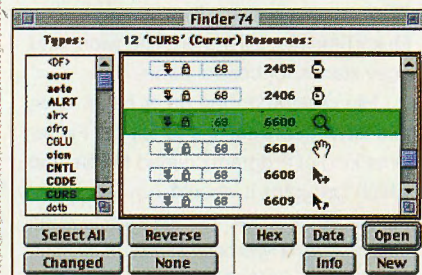
order by resource ID, Resorcerer's Cursor Editor lets you peek at the previous or next frame in the sequence while you're editing. Just click the little arrows to the right of the Try Out button. You also can use the editor's arrows to increase or decrease the time delay between actions and make the cursor spin more slowly or faster. Before turning your cursor loose on the System, give it a cursory glance with the Try Out button to see how well it behaves.

**5.** Save your changes and drag your original System file out of the System Folder, rename the System copy to System (it should still be in the System Folder), and restart your machine. The new acur will be active after you've rebooted, but you won't be able to see your work until you need the cursor to do something. What are you waiting for?

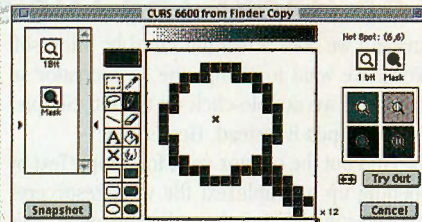
## The Hack: Your Cursor

When you use the Finder, if you double-click on a folder or disk and hold the mouse down on the second click, a special Auto-open magnifying glass appears in Mac OS 8 or 8.1. If you leave this magnifying glass over a folder (or disk), the folder opens automatically. Keep moving the cursor over folders to tunnel to the level you want, and when you release the mouse button, the last Window selected will be left open. We'll show you how to change this magnifying-glass cursor into a highly specialized arrow.

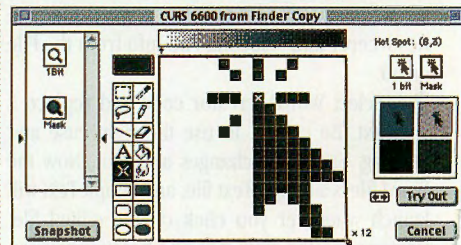
**1.** Make a copy of your Finder, and open that copy with Resorcerer. Then select the CURS type before settling on ID 6600.



**2.** Open that cursor, and Resorcerer pops open its cursor editor, which is identical to its icon editor.



**3.** Change the cursor either by using the painting tools provided or by screen-copying (or pasting a picture) over it. Notice that the little x is the hot spot. This is the exact dot where clicks count, so make sure you place it properly.



**4.** Save your changes, drag your original Finder out of the System Folder, rename the Finder copy to Finder (it should still be in the System Folder), and restart your machine. After your Mac has rebooted, just double-click and hold down the mouse over a disk (or folder) icon for your new cursor.





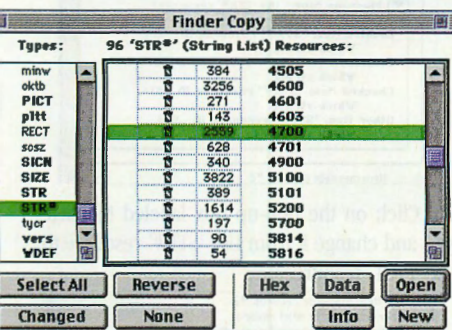
# The STR#

**A**lmost all text that Mac programs use comes in a string. Strings are used in dialog boxes (including alerts and warnings), balloons, messages, and in the case of the Finder, menus. Be careful hacking strings because some define file names, and when you change those, the applications can't find the files. Don't panic—as long as you're working on copies of the files, you should be fine.

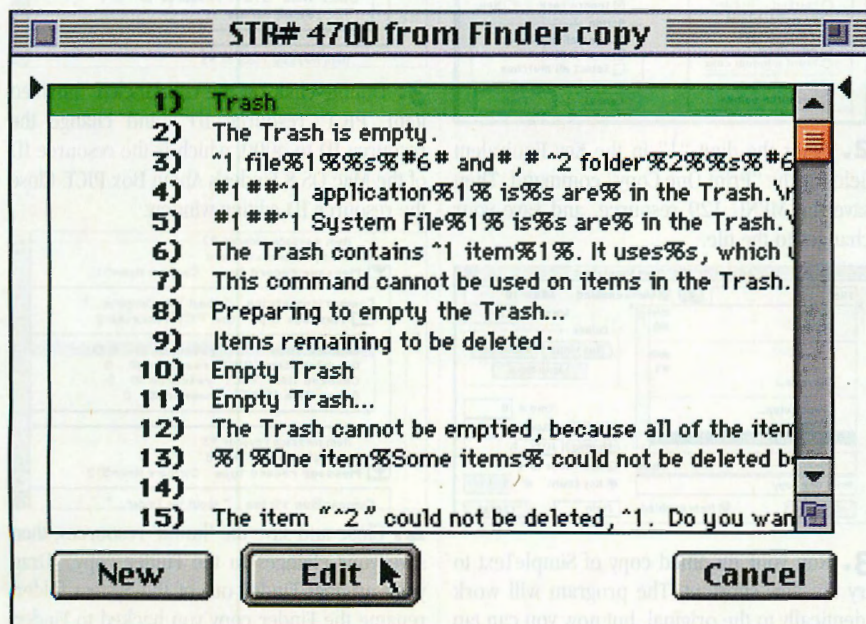
## The Hack: Your Trash Can

String arrays supply a bundle of hacking opportunities. By editing the string array for the Mac's Trash, you can rename the can, spice up related menu commands, and dilute the alert to sound less menacing. Here's how:

**1.** Create a copy of the Finder and open it with Resorcerer. Then select the STR# array with the ID 4700.



**2.** Open the string array and you'll see a long list of strings, all having to do with the Trash. Select ID #1 from the list and replace Trash with Garbage.

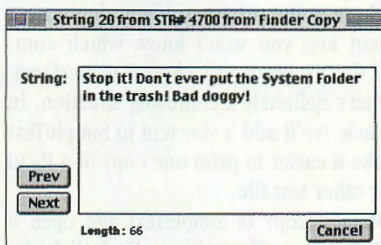


## String Resources

**STR**—A single string that creates a word or sentence used somewhere within a program.

**STR#**—An array of strings that is usually grouped around one topic; for instance, the Trash, which is determined by the whim of the programmer.

**3.** Change string ID #10 and #11 from Empty Trash to Eat Garbage, and change ID #20 from "The System Folder cannot be put in the Trash, because it contains the active system software" to "Stop it! Don't ever put the System Folder in the trash! Bad doggy!"



**4.** Save your changes, drag your original Finder out of the System Folder, rename the Finder copy to Finder (it should still be in the System Folder), and restart your machine. After your Mac reboots, the Trash icon will be rechristened Garbage, the Special menu will invite you to Eat Garbage instead of Empty Trash, and if you drag your System Folder to the Garbage, the Finder will slap you with a newspaper and call you a bad doggy!

# Resource

Types	Description
acur	animated cursor
aete	AppleScript terminology
alis	alias information
ALRT	alert (warning dialog)
BNDL	file bundle
cicn	color icon
clut	color look-up table
CNTL	Control
CODE	programming code
crsr	color cursor
CURS	cursor (black-and-white)
dftb	dialog font table
DITL	dialog item list (list of controls in a dialog or alert)
DLOG	dialog
FKEY	function keys
FREF	file reference
hldr	balloon help for the Finder file
hmnu	Help menu (balloons)
icl4	four-layer (16-color)
icl8	eight-layer (256-color)
icl8	large icon (32 by 32)
icm#	mini-icon list (family)
icm4	four-layer (16-color)
icm4	mini-icon (12 by 16)
icm8	eight-layer (256-color)
icm8	mini-icon (12 by 16)
ICN#	icon list (family)
ics#	small-icon list (family)
ics4	four-layer (16-color)
ics4	small-icon (16 by 16)
ics8	eight-layer (256-color)
ics8	small-icon (16 by 16)
INIT	initialization code (stuff run at OS startup)
MENU	menu
PAT	pattern (black-and-white)
PAT#	pattern list
PICT	pictures
ppat	pattern (color)
SICN	small icon(s)
sicn	small icon (16 by 16, black-and-white)
SIZE	application memory size
snd	digitized sound
snth	synthesized sound
STR	string
STR#	string list
styl	text type styles and colors
TEXT	plain text
TMPL	template (to view resources as data structures)
Txtr	text traits
vers	version (tells the Finder what version this is)
WIND	window
xmnu	extended appearance



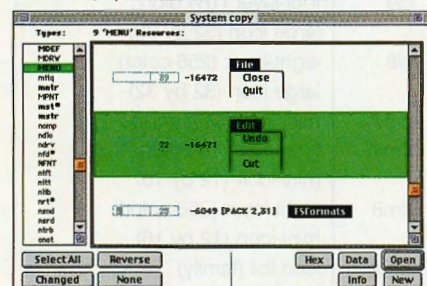
# The MENU

You'll find more menus in Mac programs than in all the restaurants in New York City combined, but hacking them couldn't be easier. The only file resource you need to worry about is blatantly labeled MENU. And it's simple to tweak the text in these menus to say any silly thing you want.

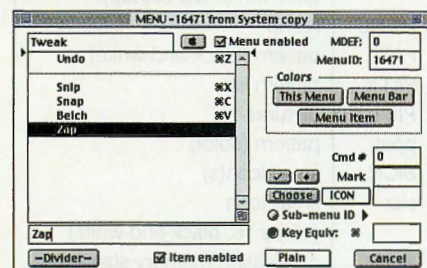
## The Hack: The Menu Bar

Although you can't change the menu bar in the Finder by hacking the MENU resource, you can use it to perform intensive menu hacks that will show up in other programs. Like the Calculator. Or the Key Caps menu. We'll show you how to edit the Edit menu.

**1.** Create a copy of your System file and open it with Resorcerer. Then choose MENU from the list of resource types and scroll down to menu -16471. This is an Edit menu.



**2.** Open the menu and edit it by selecting the words you want to change and typing their replacements in the Text Edit Area. For example, instead of Edit put Tweak, and replace Cut, Copy, Paste, and Clear with Snip, Snap, Belch, and Zap.



**3.** Save your changes and drag your original System file out of the System Folder, rename the System copy to System (it should still be in the System Folder), and restart your machine. To try it out, run the Calculator or Key Caps (under the Apple menu) for a few good giggles.

### Tweak

Undo ⌘Z

Snip ⌘X

Snap ⌘C

Belch ⌘V

Zap

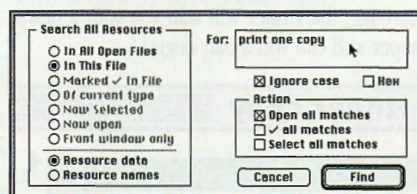
## Fickle Finder

There are a few programs that don't use Menu resources, and the Finder is one of them. Of course, the Finder still has menus; it just creates them at startup from strings.

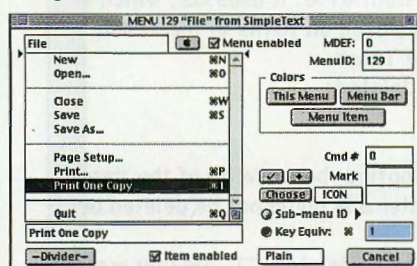
## The Hack: Menu Shortcuts

Changing the commands in a menu is good, clean fun, but changing the keyboard shortcuts in a program's menus can actually be useful. The only thing to watch out for is assigning a shortcut key that's already in use elsewhere in the program. If you duplicate a shortcut key, you won't know which command the program will choose to perform, and that's definitely a confusing situation. In this hack, we'll add a shortcut to SimpleText to make it easier to print one copy of a Read Me or other text file.

**1.** Make a copy of SimpleText and open it with Resorcerer. Then choose Find All in the Resource menu, and search all resources in the file using the matching text "Print One Copy". This will find and open the proper MENU resource, and highlight the right menu command for you automatically. Searching like this is really handy when you don't know which resource is which, or where a piece of text is in all the different resources.



**2.** Enter the digit "1" in the Key Equivalent field for the "Print One Copy" command. Then save the MENU 129 resource, and save your changes to the file.

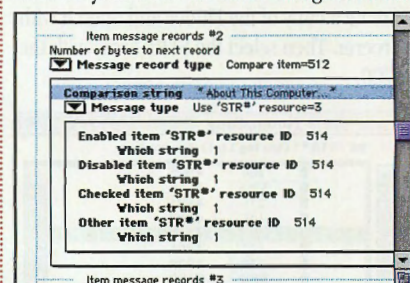


**3.** Run your modified copy of SimpleText to try the new shortcut. The program will work identically to the original, but now you can tap command-1 to quickly print one copy of whatever you're reading. Simple text!

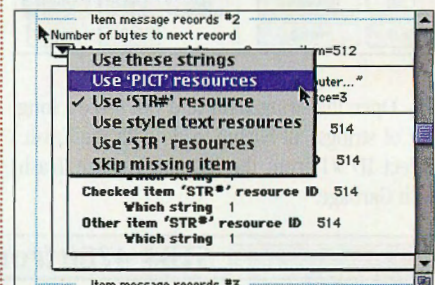
## The Hack: Menu Balloons

Did you know that you can display any PICT you want in a help balloon instead of some boring text message? In this hack, we'll change the balloon help for the Mac OS 8 Finder's About This Computer command to the same About Box PICT we hacked earlier.

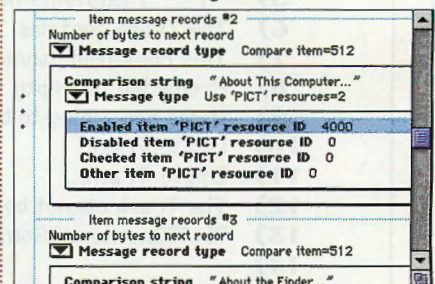
**1.** Make a copy of the Mac OS 8 Finder and open the copy with Resorcerer. Click on the 'hmnv' resource type, then choose Find All to search all 'hmnv' resources for the text "About This". Resorcerer's data editor opens two menu help resources and selects the matching entry in each for you. Make the same changes to both.



**2.** Click on the pop-up box labeled Message type and change it from Use 'STR#' resource to Use 'PICT' resources.



**3.** Double-click on the cell labeled "Enabled item 'PICT' resource ID", and change the resource ID to 4000, which is the resource ID of the Mac OS 8 Finder's About Box PICT. Close the resource ID editing window.



**4.** Close and save the 'hmnv' resources; then save your changes to the Finder copy. Drag your original Finder out of the System folder, rename the Finder copy you hacked to Finder, leaving it still in the System folder, and restart your machine.



# The SND

If you have an ear for music, or if you just plain like the sound of your own voice, you can hack the Mac's sound system to play your personal faves. You also can edit out the annoying noises in other programs and replace them with obnoxious numbers all your own.

## Sound Resources

**snth**—Synthesized sounds: the old-fashioned tones, beeps, buzzes, and warbles created by turning mathematical algorithms into audio waves. They're functional but sound artificial and out-of-date.

**snd**—Digitized audio (also called sampled sounds) sounds much more real than synthesized audio. Create digital sounds by inputting sampling sounds through a microphone at very high rates, then duplicating the samples with the speaker. Digitized samples can replicate human voices, music snippets, and any other noise that makes its way into a microphone.

## The Hack: The Sound Control Panel

The Sound Control Panel is in either the Control Panels folder or the Apple Extras folder. It has an Easter egg sound (a raucous "Wowww!") in it that you can listen to by holding the Option key down as you choose from its pop-up menu.



Sound

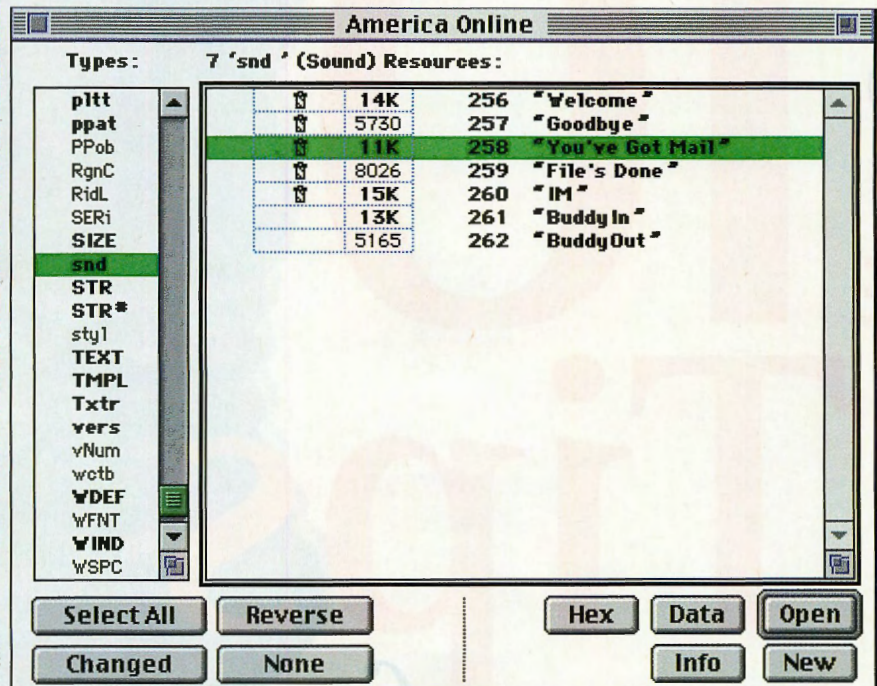


To hack the egg, simply drag the Sound control panel file onto Resorcerer to open it, then open 'snd' -4064 and record a new sound ("Yecchhh!") into the resource (make sure your voice is nice and gravelly with a faint touch of phlegm). Close the resource, close the file, launch the control panel, and you've got your own scrambled Easter egg surprise.

## The Hack: AOL's Mail Message

Even if you've lived under a rock in a cave with earplugs on for the last several years, you've probably heard America Online's infamous "You've got mail" alert. We're going to update the alert to warn you that "You've got spam," because if you have AOL, you probably do.

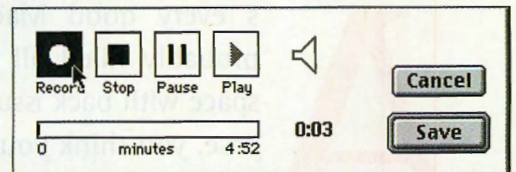
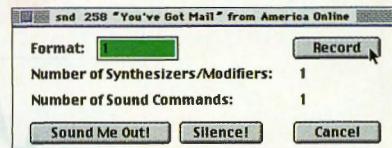
1. Create a copy of AOL and open the copy with Resorcerer. Select the resource type **snd** and ID #258. AOL names the sound for easy identification, probably assuming this is the first thing people will want to change.



2. When you open the **snd** resource, Resorcerer presents you with a window that allows you to record over the sound (Record), listen to the sound (Sound Me Out!), clear the sound (Silence!), or cancel the action (Cancel).

3. Record your sound using your Mac's microphone input, and don't forget to press Stop when you're done. You can play your sound to see if you got it right. If you don't like what you hear, just press Record and try again. When you get it right, press Save to immortalize your recording. (This saves only that sound; it does not save your changes to AOL.)

4. Save your changes (this time, to AOL). To test your hack, run the copy of AOL and wait around for new spam to be delivered—you shouldn't have to wait long. ☑



David K. Every is a Mac software engineer who has owned, hacked, and programmed Macs since 1984. He spends all his free time working on the MacKiDo Web site (<http://www.mackido.com>).





FileMaker

by Dave Prochnow

Illustration by Ken Bousquet

Photos by Aaron Lauer

## The 10-Step Database Customization Plan



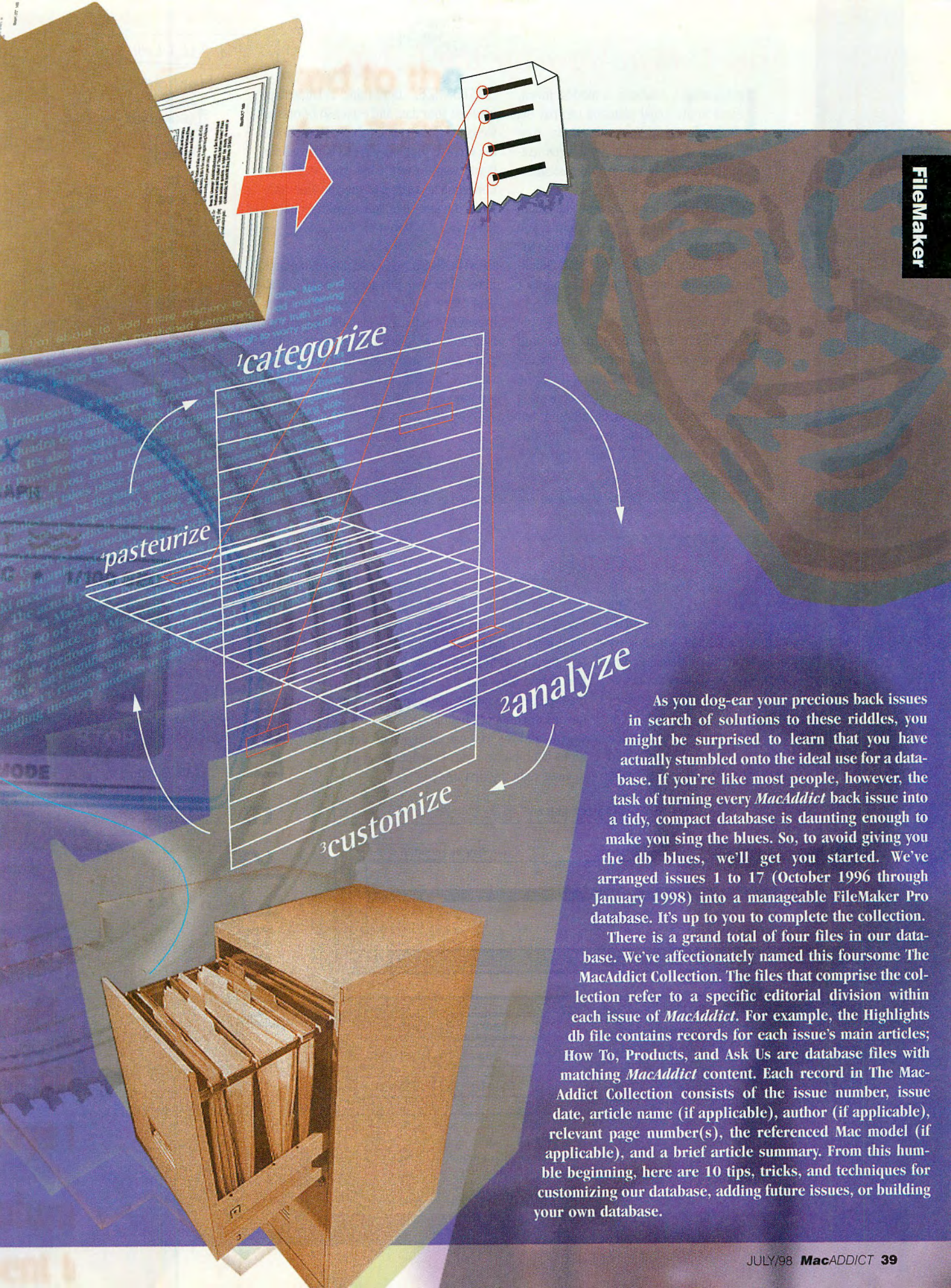
FIND FOUR  
SAMPLE  
DATABASE  
FILES and a  
trial version  
of FileMaker  
Pro on  
The Disc.

# 10 Tips *for*

**A**s every good Mac addict should, you've probably filled all your available bookshelf space with back issues of your favorite Mac mag. Likewise, you think you can quickly and easily locate any article, anytime. Are you ready for a challenge? Let's test your organizational skills. In which issue is the article on customizing icons? Or, better still, in which issue did Owen Linzmayer discuss partitioning IDE hard disk drives? Stumped? You're not alone. Heck, even the editors of the magazine can't answer these off the tops of their heads (except for Mark Simmons, who will never forget writing the icon feature).

# FileMaker





As you dog-ear your precious back issues in search of solutions to these riddles, you might be surprised to learn that you have actually stumbled onto the ideal use for a database. If you're like most people, however, the task of turning every *MacAddict* back issue into a tidy, compact database is daunting enough to make you sing the blues. So, to avoid giving you the db blues, we'll get you started. We've arranged issues 1 to 17 (October 1996 through January 1998) into a manageable FileMaker Pro database. It's up to you to complete the collection.

There is a grand total of four files in our database. We've affectionately named this foursome The MacAddict Collection. The files that comprise the collection refer to a specific editorial division within each issue of *MacAddict*. For example, the Highlights db file contains records for each issue's main articles; How To, Products, and Ask Us are database files with matching *MacAddict* content. Each record in The MacAddict Collection consists of the issue number, issue date, article name (if applicable), author (if applicable), relevant page number(s), the referenced Mac model (if applicable), and a brief article summary. From this humble beginning, here are 10 tips, tricks, and techniques for customizing our database, adding future issues, or building your own database.



## Tip 1. Plan Now for the Future

In creating a database, a modest investment in the initial planning can pay big dividends later. You can divide your planning task into four general steps: categorize, analyze, customize, and pasteurize.

**CATEGORIZE.** Look at your data, and divide it up by category. For example, you could create a FileMaker Pro database file for cataloging all *MacAddict* staff QuickTime movies and another for sponsor demo software.

**ANALYZE.** Examine your data and determine which elements are really worthy of cataloging. Including the issue price in each record might serve as a neat economic indicator of inflation, but only Alan Greenspan would find this data interesting, and it might put even *him* to sleep.

**CUSTOMIZE.** Determine relationships between your data and establish layouts or views for these relationships. How should the records look on screen? For example, if you want to reference your *MacAddict* Collection according to specific Mac computer models, then you should prepare a FileMaker Pro layout for this view.

**PASTEURIZE.** No, we're not talking milk here. This step just means reducing all your planning into the skeleton of a living, breathing database—keeping the important items and discarding the rest. At this point, you should assign fields to all relevant data and, if needed, break it up into separate files.

**YOU JUST CAN'T REPLACE** a pencil and paper when it comes to planning a project. Here we've divided *The MacAddict Collection* into four database files, and we've decided what should go into each database.

### MacAddict Collection

- Highlight  
Issue #      Topic  
Issue Date      Page  
Title  
Author
- How to  
Issue #      Topic  
Date      Rating  
Title  
Author
- Products  
Issue #      Page  
Date      Rating  
Manufacturer  
Product
- Ask Us  
Issue #  
Date  
Topic  
Page



## Tip 2. Play the Field

You're now ready to play ball. The first step in populating a new database file is defining its fields, which serve as places to hold your data. FileMaker Pro must know what type of data you plan to insert into your fields. To FileMaker (or any other database program), a field that holds a dollar amount is different from a field that holds a date, which is different from a field that holds a text string. Inserting the wrong

data into a field can result in problems (such as sorting errors) later on. So put the right kind of data in the right fields: place text data in text fields; numeric data in number fields; date and time data in each of their respective field types; and QuickTime movies in container fields.

Oh, and yes, you can change field definitions later, but you may lose data, so it pays to get it right the first time.

**FILEMAKER HAS A ONE-STOP SHOP** for defining the fields you use to create your database. There are eight basic field types, and many of those fields have suboptions that let you control formatting, auto-entry options, and so on. To make a new field, simply click **Create**, select a field type, and enter the field name in the **Field Name** space. Simple, huh?

## What Is a Database?

ALTHOUGH THEY SEEM SIMPLE in concept, the terms used to describe databases can quickly get darned obscure. To help out, here's a brief glossary of database terms:

**FILE:** A homogeneous collection of data that's related to a single topic.

**FIELD:** The specific individual definition that holds the data itself.

**RECORD:** An assembly of fields.

**SCHEMA:** The underlying structure of a database—sort of a who's related to whom.

**ONE-TO-ONE:** A monogamous relationship between two files in which one field matches another file's field.

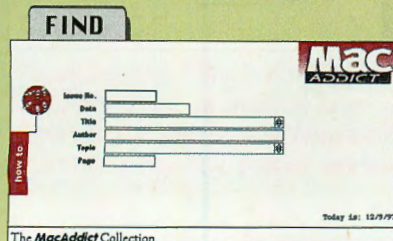
**ONE-TO-MANY:** This relationship bonds one field in one file to multiple fields in a second file.

**SELF-JOIN:** A relationship between different fields within the same file.

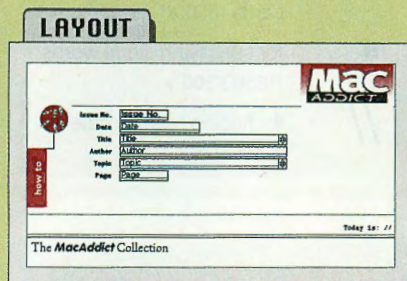


## Tip 3. A DB With a View

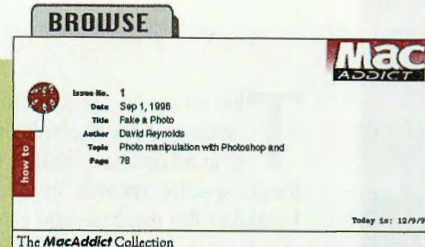
After you've created the fields you need for your database, it's time to do the layout. Select Layout from the Mode menu, and get to work. FileMaker does some of the work for you by providing the fields that you've created, complete with labels for each of them. Use FileMaker's layout tools to add fields, labels, and graphics to the page. Be sure to take advantage of FileMaker's grid functions to line up your elements. Once you have a basic layout for your database, you can check out how it looks (and make changes) in one of FileMaker's four modes: Browse, Find, Layout, or Preview. Access these modes through the Mode menu.



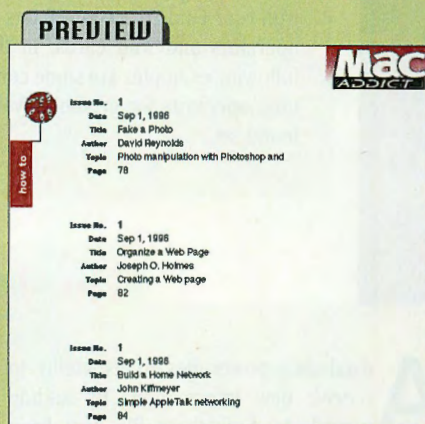
**THIS IS WHERE YOU GET** a lot out of a completed database. Just type the item you are looking for in the appropriate fields and press Find. FileMaker Pro initiates the search, returns the found records, and enters Browse mode. The catch here is that FileMaker displays only the records that match what you typed, so you have to select Find All to browse your entire database.



**THINK OF THIS AS** the metaview. You can't make changes to your data in Layout mode, but you can alter how that data is presented. Using Layout mode, you can create customized layouts for presenting your data in pretty much any format you like.



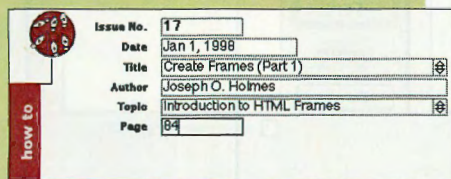
**THIS IS YOUR BASIC** garden-variety data-entry mode. In Browse mode, you can add or remove information from any of the database's fields.



**BEFORE YOU PRINT**, this mode gives you a quick heads-up on how your copy will look.

## Tip 4. Fat-Finger Filing

This is the part that takes the most time, is the least interesting, and is absolutely vital to any database. This is where you roll up your sleeves and start entering data. FileMaker automatically saves changes as you go, so you don't risk losing data in case of a crash or power outage. To save you some time (as we said before), you can find database files on this month's disc that already contain the data for the first 17 issues of *MacAddict*. You're welcome.



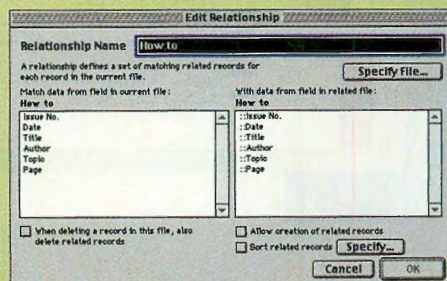
**THE MECHANICS OF DATA ENTRY** in FileMaker are simple. Enter Browse mode, click in a field, enter the appropriate information, and then press tab, which moves you to the next field. Shift-tab moves you back a field. Command-N creates a new record and automatically places the cursor in a field in the new record.

## Tip 5. Building Relationships

One of the most powerful aspects of database design is relationships. It's also one of the toughest concepts when it comes to database work. A database relationship is a connection between data fields that are cross-linked through multiple database files. For example, a *MacAddict* author may have written several kinds of articles for us; that author's name would appear in several of our sample database files. A FileMaker Pro database can form two kinds of relationships, both of which allow data to interact between linked fields.

**LOOKUP.** This is the simplest form of relationship. A lookup copies data between related fields, but it does so only when you manually create a lookup. Once you've created a lookup relationship, the data remains fixed within the related fields. Changing the information in a lookup field doesn't automatically update the information throughout all relationships.

**RELATIONAL.** This is a more comprehensive and dynamic treatment of linked field relationships. Think of this as an automatic version of a lookup. In a relational database, linked fields in all relational files are updated immediately after you enter any new information. The database is in a fluid state of change. Your data is stored in one file, but the same data fills fields in other database files, which makes it extremely powerful. You don't have to reenter data in the Author field for a specific article if two different databases refer to the same article. FileMaker handles certain kinds of relational links, but it doesn't support them all. If you're looking for that kind of power, you'll need a higher-end database.



**IN FILEMAKER'S EDIT RELATIONSHIP** dialog box, you can set up how fields in different files relate to each other. You also can set sort and deleting preferences here. Take some time and play with various kinds of relationships to get the hang of them.



## Tip 6. Finders, Keepers

The ability to locate information easily is the hallmark of good database design. To locate specific records inside a FileMaker Pro database, you enter the Find mode. The matching records that your Find operation returns are called the found set. So how do you get the best results with your Find? You can use lots of operators and wild cards; in the following examples are some common operators for grooming your found set.

- = ..... for finding any word in a desired field (=David)
- = = ..... for finding exact words (==David Reynolds)
- @ ..... for inserting a single-letter wild card (6500/@00)
- \* ..... for inserting multiple wild cards (6500/\*)
- || ..... for specifying literal words ("6500/300")
- // ..... for finding today's date in a date field

As a test of The MacAddict Collection database, try to return a found set for the two challenge questions we posed at the beginning of this tutorial.

**WHEN YOU TYPE "=PDF" in the Topic field, this search will return any records that contain the acronym PDF in the Topic field. The single equal sign returns a given word in the field.**

## Tip 7. Adding Records

A database's power lies in its ability to receive new information. By adding records to a database file, you keep your information current, as well as weed out bad data. For example, you can enter each new issue of *MacAddict* into The MacAddict Collection on The Disc. If you want to try adding the editorial content from this issue to The MacAddict Collection, just follow these simple steps for each article.

1. Start in Browse mode.
2. Choose New Record from the Mode menu.
3. Type the appropriate data into the record's fields.
4. FileMaker Pro automatically saves this new record as you enter your data.
5. Repeat for each article.

**PICK UP WHERE WE LEFT OFF by entering new data into our database. With just a couple of keystrokes, you're on your way.**

## Importing Movies

A FILEMAKER PRO DATABASE can store more than just facts and figures. Using a container field, you can insert pictures, sounds, and even QuickTime movies into any database. This field isn't a static box, however. You can fiddle with the alignment and cropping of images and movies in Layout mode. Just select the Graphic command from the Format menu and make your selections in the Graphic Format dialog box.

## Tip 8. Sorting It Out

Typically, FileMaker Pro stores records in the order in which you added them to the database file—an arrangement that's often less than satisfactory for browsing the database. If you're looking to browse in alphabetical or chronological order, you must sort your database file accordingly—all your records or a found set of records. Either way, the procedure remains the same. Let's test FileMaker's sorting abilities by sorting The MacAddict Collection's How To file alphabetically by author and chronologically by issue date.

1. Choose Sort from the Mode menu.
2. Select the fields and sorting criteria: author—ascending date—ascending
3. Now, Sort.

**TAILOR HOW YOUR DATA APPEARS by tapping new info into FileMaker's Sort Records dialog box. After calling this dialog box up, you can move various fields into the Sort Order window and select whether they should sort in ascending, descending, or custom order.**



## Tip 9. What You See Is What You Print

A time will come when you'll want to create a hard copy of a specific record, a found set, or your entire database (that is, if you have a blatant disregard for trees and our environment). With a FileMaker Pro database, you also can print blank

records for use in analog record-keeping, listings of field definitions, and the text listings of command scripts. The Print command in the File menu yields five radio buttons that let you exercise some control over what you print.

Number pages from: 1

Print: ☒ Records being browsed  
☐ Current record  
☐ Blank record, showing fields as formatted  
☐ Script: All scripts  
☐ Field definitions

ALTHOUGH IT SEEMS LIKE A NO-BRAINER, FileMaker's print options can be tremendously useful. Here you can print the records you're browsing, the specific record on the screen, or a blank record that shows empty fields.

WHAT MAC PROGRAM WORTH ITS weight in silicon doesn't include the ability to automate command processing through scripting?

In a FileMaker Pro database, scripts are defined with ScriptMaker, a special software package that serves as an editing environment for performing frequently used database commands via scripting. ScriptMaker uses steps for performing FileMaker Pro commands. These steps include commands for control, navigation, windows, sorting, finding, printing, editing, files, fields, records, importing and exporting, and spelling. Furthermore, ScriptMaker provides special "hooks" into Apple events and AppleScript.

Once you've written the ultimate db script, it's time to use it. Unlike some scripting packages, ScriptMaker packages its scripts-of-steps into convenient graphic buttons. You can insert these buttons into any database for automating layout, sorting, record finding, and printing tasks.

Now, an example of scripting. Consider this script for searching The MacAddict Collection for citations of articles on specific Mac models. By clicking on the Model button, FileMaker Pro takes you to a predefined Model layout in Preview mode. At this point, you can enter a specific Mac model search parameter and obtain a found set of matching records. The script then generates a Continue button for printing the found set and a Cancel button for returning to the beginning layout. After you've made your selection, the script takes you back to Browse mode in our original layout.

Go to Layout ["Model"]  
 Enter Preview Mode [Pause]  
 Page Setup [Restore, No dialog]  
 Print [No dialog]  
 Go to Layout [original layout]  
 Enter Browse Mode [ ]

## Becoming a ScriptMaster With ScriptMaker

## Tip 10. A DB for All

A recent output addition to FileMaker Pro is the ability to serve a database on the Web. This export option can be either simple or complex (using customized Web tags called Claris Dynamic Markup Language, or CDML). Regardless of the format, the result is the same—data for the masses. There is one downside to this promise of universal database access: you must use FileMaker Pro on a Mac equipped with a TCP/IP Internet connection. Although you can serve up your database using a part-time TCP/IP connection over a modem to your local Internet service provider, to do this job properly requires jacking your Mac into a full-time ISDN, Frame Relay, or T1 direct connection, and it also requires having a single, static IP address for your Mac. As an illustration of FileMaker Pro's simplest Web-export option, we've included an HTML version of each database file in The MacAddict Collection on The Disc. ■

IF IT'S NOT WEB READY, IT'S CRRRAP! FileMaker Pro 4.0 is one of the few Web-ready applications that makes sense for the Web. With its built-in Web-server abilities, any FileMaker Pro database can be made available to anyone with a Web browser.

Netscape: Howto.html

Back Forward Home Reload Images Open Print Find Stop

Go To:

Live Home Page Net Search Apple Computer Apple Support Apple Software

Issue No.	Date	Title	Author	Topic	Page
1	9/1/96	Fake a Photo	David Reynolds	Photo manipulation with Photoshop and PhotoDeluxe	78
1	9/1/96	Organize a Web Page	Joseph O. Holmes	Creating a Web page	82
1	9/1/96	Build a Home Network	John Kiffmeyer	Simple AppleTalk networking	84
2	10/1/96	Customize Icons	Kathy Tafel	Creating icons with ResEdit	76
2	10/1/96	Work with HTML	Joseph O. Holmes	Beginning HTML editing	82
3	11/1/96	Create Web Graphics	Joseph O. Holmes	Creating GIFs and JPEGs	98
4	12/1/96	Create a Macro	Ross Scott Rubin	Using QuickKeys and OneClick to create keyboard macros	98
4	12/1/96	Get Your Site Online	Joseph O. Holmes	Using Fetch to maintain a Web site	102
5	1/1/97	Create a Comic Book	David Reynolds	Publishing a comic book with LightningDraw GX	90
5	1/1/97	Make a Button Bar	Joseph O. Holmes	Making GIF button bars with Photoshop	94
6	2/1/97	Fix Bad Scans	J. Daniel Jones	Using Photoshop to correct scanned images	92
6	2/1/97	Add Sound to a Web Page	Joseph O. Holmes	Using MediaPlayer and SoundEdit Pro to create sound files for the Web	96
7	3/1/97	Use AppleScript	Kathy Tafel	Basic building blocks for making a AppleScript	88
7	3/1/96	Make a Custom Palette	Joseph O. Holmes	Creating browser-safe GIFs with DeBabelizer	94
8	4/1/97	Work with OpenDoc	D. D. Turner	Using OpenDoc Stationery	84
8	4/1/97	Speed Web Access	Joseph O. Holmes	Tips for faster Web site access	88
9	5/1/97	Use MacsBug	Stefan Anthony	System debugging with MacsBug	84
9	5/1/97	Put Up a Web Page Fast	Joseph O. Holmes	Creating Web pages with Myrmidon and CyberPress	88

Realizing the power of the database, Dave Prochnow has begun digitally organizing all of his greatest collections: the genealogy of his crayfish farm's progeny, his entire Milli Vanilli discography, and the complete bibliography of his informative MacAddict How To contributions.





# reviews

Bigger, badder, faster: hardware, upgrades, emulators, and more.

## Power Macintosh G3/300

### HARDWARE

**COMPANY:** Apple Computer

**CONTACT:** 800-795-1000 or 408-996-1010, <http://www.apple.com>

**PRICE:** \$4,869

**SPECIFICATIONS:** Standard configuration: 300MHz G3, 128MB of RAM, 1MB of Level 2 backside cache, 2X4GB Ultra Wide SCSI, 24X CD-ROM drive, 100baseT Ethernet, 6MB SGRAM, 128-bit graphics card with 8MB of VRAM



THE ULTIMATE TOWER OF POWER, this G3 is maxed out and ready to fly.

**W**hat can you say about the fastest Mac ever sold? It's amazing. Start with a 300MHz G3 PowerPC processor in an easy-to-open K1 minitower case, add a 66MHz system bus, build in 128MB of RAM, add three speed-enhancing PCI cards—an IMS TwinTurbo video card, a fast Ethernet card, and an Ultra Wide SCSI card—and top it off with a 4GB RAID. Now *that's* a Mac built for speed.

Just how much speed? Benchmarks show just less than a 10 percent performance boost over the G3/266 that Apple recently released, which is a shade less than the nearly 13 percent clock speed increase from 266MHz to 300MHz. Regardless, compare that with an 8600/300, one of the fastest 604e-based Macs ever made. The G3/300 beat on the 8600 like a schoolyard

bully used to beat on me—trounced it by a whopping 42 percent in tests using Norton Utilities. Not bad, considering both processors run at the same speed. Chalk that difference up to the G3's faster system bus, its RAID, and the G3 processor with 1MB of backside cache.

The out-of-the-box setup was, as always, simple and efficient. Although the G3/300 comes with two hard drives and RAID software, the drives don't form a RAID right out of the box. To get that benefit, you have to format the hard drives with the RAID software—SoftRAID from Conley Software (<http://www.softraid.conley.com>)—which is included on CD-ROM with the G3. The software gives two RAID choices—striped, for extra speed, or mirrored, for extra security. SoftRAID even lets you convert standard

HFS volumes into striped RAID partitions in the background. We chose to start with a clean slate, so we simply initialized the disks into one striped RAID partition, one mirrored partition, and two plain HFS partitions. SoftRAID did the job without incident.

Other than the bundled RAID software, the G3/300 also comes with DiamondSoft's FontReserve, which seems an odd choice for a software bundle. Don't take this the wrong way; FontReserve is fine software that we use daily at *MacAddict*. However, this Power Macintosh screams for a bundle that

includes Adobe Photoshop, Macromedia FreeHand, and Strata 3D; FontReserve seems, well, uninspiring in comparison.

The G3/300 is built for speed, and at an Apple Store price of only \$4,869, that's a lot of bang for the buck. So what's to complain about? A few things, actually. As has been well publicized by now, Gossamer-based Macs are limited to three DIMM slots (for a total of 768MB of RAM) and three PCI slots. The amount of RAM isn't so much of a problem—after all, 768MB of memory is an awful lot of ones and zeros. It's the kind of memory that's

### NORTON UTILITIES SYSTEM INFO OVERALL SYSTEM RATING

The higher the number, the better the performance.

<b>G3/300</b>	<b>649</b>
<b>G3/266</b>	<b>591</b>
<b>G3/233</b>	<b>540</b>
<b>8600/300</b>	<b>457</b>
<b>7300/200</b>	<b>331</b>
<b>7600/120</b>	<b>223</b>

reviews



### FREAKIN' AWESOME

The most valuable products, the coolest gizmos.



### SPIFFY

A solid offering. Overall a good investment.



### YEA, WHATEVER

A few good features, but generally a waste of time and money.



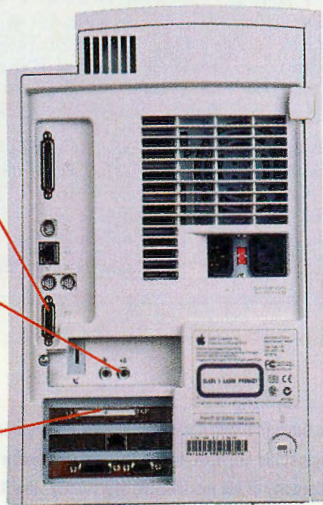
### BLECH!

We hate to even blotch our pages with the thing.

This G3 powerhouse has built-in video in addition to its high-power video card.

The personality card is strictly audio-only. The second video card gets in the way of an A/V personality.

This PCI slot is taken up by a speedy SCSI card that provides RAID capabilities.





Bless the Apple engineers who came up with these easy-to-open case latches.

The Gossamer board includes two ATAPI/IDE interfaces, one of which controls the CD-ROM.

There's a 300MHz G3 chip under this tiny heat sink? You must be joking.

Total RAM is limited by three expansion slots.

The on-board video is accelerated through an ATI Technologies chipset.

at issue. The G3's use SDRAM, which is cheaper but makes DIMMs incompatible with G3 Macs. There's no way to use the RAM that owners of older Macs have amassed, but that's the price you pay for a cheaper design.

The G3 has only three PCI slots. This limitation didn't seem to be a problem until the G3/300 came along. It comes with all of its PCI slots filled, and each card provides redundant functions—after all, Gossamer-based Macs already have Ethernet, SCSI, and video as part of the motherboard. Users who want to add a video capture card to the G3/300 have to remove one of the existing cards—video capture isn't available as a personality card option if the second video card is

installed. Apple may be able to solve this problem by moving the capabilities of one of the cards to the motherboard—fast Ethernet is a likely candidate. The Gossamer design needs to last a while as part of the company's plan to stay profitable.

That aside, it's hard to go wrong with the G3/300. It's the fastest Mac available, and the sticker price is a bargain—especially when you compare it with what you might have paid for an older top-of-the-line Mac. Despite theoretical expansion-slot limitations, the G3/300 will satisfy most Mac

enthusiasts. Sure, there are a few folks out there who need more than three PCI slots, but there are a couple of solutions—either buy an inexpensive PCI breakout box or wait for Apple to come out with a Mac that has more PCI slots. We vote for the former option. The G3/300 is a great Macintosh.—David Reynolds

**GOOD NEWS:** Simply the fastest Macintosh on the planet.  
**BAD NEWS:** Limited PCI, DRAM slots.  
Uninspiring software bundle.



Photos by Aaron Lauer

#### FUN & GAMES

Pax Imperia: Eminent Domain p. 62  
The Journeyman Project 3: Legacy of Time p. 63  
Top Gun: Fire at Will p. 64

#### CONFIGURATION

Action Files 1.0 p. 58

#### PERSONAL PRODUCTIVITY

OmniPage Pro 8.0 p. 56  
Dramatica Pro 3.0 p. 60

#### GRAPHICS & SOUND

Test Strip 2.0.2 p. 48  
QuickTime 3.0 p. 50  
MusicShop 2.02 p. 54

#### COMPATIBILITY

Virtual PC vs. SoftWindows 95 5.0 p. 46  
StyleScript 3.7 p. 58

#### HARDWARE

Power Macintosh G3/300 p. 44  
NUpower G3 1400 Upgrade p. 49  
MACH Speed G3 p. 52





## Virtual PC Versus SoftWindows

### COMPATIBILITY

#### Virtual PC 2.0 With Windows 95

**COMPANY:** Connectix

**CONTACT:** 800-950-5880 or 605-571-5100,

<http://www.connectix.com>

**PRICE:** \$149.95 (SRP)

**REQUIREMENTS:** PowerPC 603e, 180MHz or faster, System 7.5.5 or later, 24MB of RAM, 150MB of free hard disk space, CD-ROM drive

#### SoftWindows 95 5.0

**COMPANY:** Insignia Solutions

**CONTACT:** 800-848-7677 or 408-327-6000,

<http://www.insignia.com>

**PRICE:** \$189.95 (SRP)

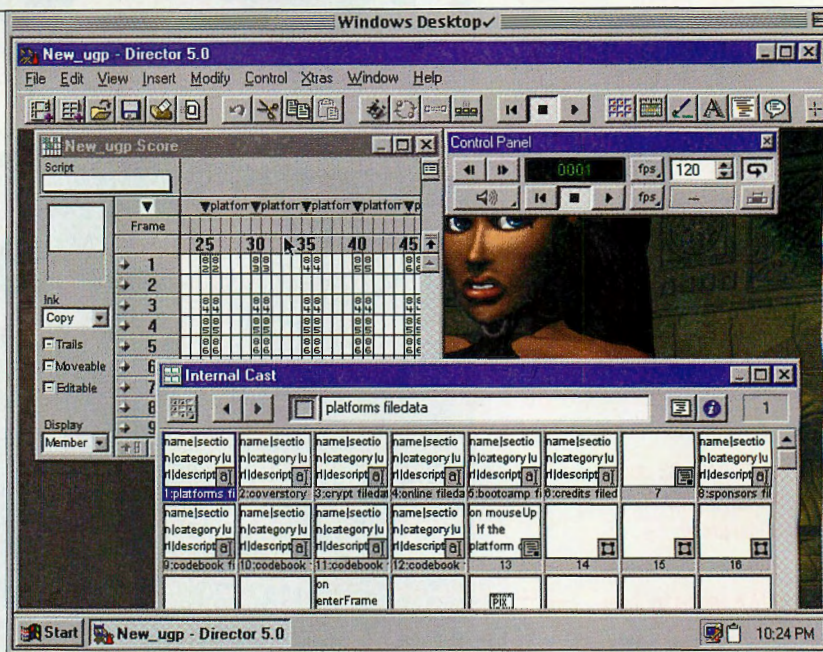
**REQUIREMENTS:** PowerPC, System 7.1 or later, 16MB of RAM, 10MB of free hard disk space, CD-ROM drive

**W**e love our Macs, but sometimes there's no escaping the Windows empire, and we simply have to use a program without a Mac equivalent. If you're in this situation, you have three choices: buy an expensive PC; buy an expensive PC compatibility card from Apple or a vendor such as Orange Micro; or buy one of two recently updated programs, SoftWindows 95 5.0 and Virtual PC 2.0 With Windows 95, which emulate a PC and run Windows on your desktop.

Both programs come with Windows 95 and allow you to use Windows applications by emulating Intel CPU instructions in software. Emulating a PC isn't the fastest way to run Windows, but if you have a mission-critical Windows application or frequently send or receive files formatted for Windows, one of these products may fit the bill.

Both SoftWindows 95 and Virtual PC are aimed at the casual Windows user or gamers interested in playing 3Dfx Voodoo-enhanced PC titles on Macs. Despite SoftWindows' and Virtual PC's nearly identical marketing and functionality, differences in price, installation, ease of use, and compatibility may affect your decision about which one is right for you.

Right out of the box, each program is a different experience. The Virtual PC package comes with a thick user manual, a single CD with the Virtual PC installer, and a disc for Windows 95, although you won't actually have to use the Win 95 disc. Installation is a snap: just pop in the installer and make it go. Virtual



PROGRAMS SUCH AS Macromedia Director run fantastically under Virtual PC and SoftWindows 95.

PC will claim 260MB of hard disk space as your C drive, though you can change that later and reinstall Windows 95. SoftWindows comes with a more substantial manual and installs from two CDs. SoftWindows takes significantly longer than Virtual PC to install, but it asks you how much space to allot to your C drive, allowing you to set it as high as 505MB.

Despite similarities between the products, Virtual PC's and SoftWindows' manuals are quite different. Virtual PC installs either DOS or Windows, so the manual is multipurpose. It divides attention between installing and optimizing different OSs, with a brief guide to the world of Windows 95. The SoftWindows manual covers the same ground but more extensively and with a better primer on Win 95 terms and functions. The differences in the manuals may explain the price disparity. At \$189.95, SoftWindows 95 is the more expensive package. Put the \$40 you'll save on Virtual PC toward a Windows 95 handbook (if you need a thorough Win 95 manual, you'll want to buy one separately in either case).

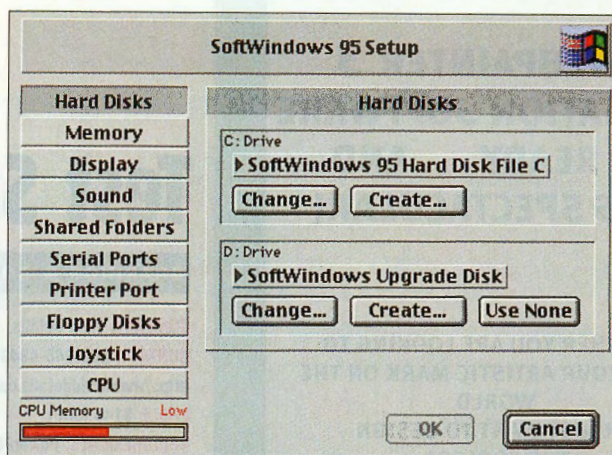
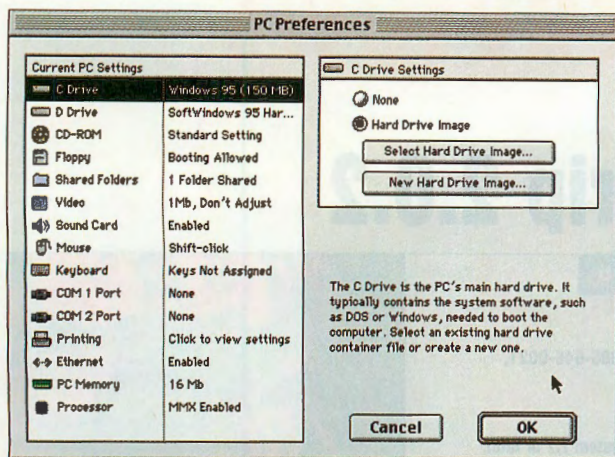
Because you own a Mac, ease of use is probably an issue. There are no guarantees that Windows 95 will behave, but Virtual PC and SoftWindows are easy to set up and troubleshoot. Each has a settings dialog box that lets you customize Intel emulation for

such things as MMX compatibility, Sound-Blaster 16 support, and peripheral control.

Virtual PC and SoftWindows offer nearly identical settings options, but Virtual PC has a more Mac-like look and feel, making it easier to use in an alien OS environment. That Mac essence carries over into other areas. To be useful, Windows 95 needs access to your Mac's CD-ROM and floppy drive, and other external devices. To eject a mounted Mac CD or floppy in SoftWindows, you need to select the device, then go to the menu bar and eject it, or remember the eject command. Virtual PC has a tool bar across the bottom of the Win 95 window with instant-access buttons.

You can interact between Windows 95 and Mac OS applications in a couple of ways. Virtual PC and SoftWindows both have drag-and-drop features that allow you to move files from one desktop to another. You also can cut and paste text and graphics between the two environments. As nice as cut and paste is, though, it's the implementation of shared folders and volumes that really makes OS interaction easy. In both programs, you can set folders or entire volumes as shared spaces that you can access from either the Mac or Windows OS. If you're working on a Macromedia Director project or an Adobe Photoshop graphic that will be displayed in





**VIRTUAL PC AND SOFTWINDOWS 95 offer similar settings controls, but Virtual PC has a more Mac-like look and feel.**

Windows, by keeping those files in a shared directory, you can open them easily by double-clicking in either environment.

The two most important Windows emulation issues are compatibility and speed—the two areas in which Virtual PC and SoftWindows are most alike. Each was able to install and run mainstay programs such as Director, Photoshop, Adobe Premiere, and Microsoft Word without any glitches. Other Windows-specific applications—WinZip, PaintShop Pro, and InstallShield—also ran perfectly. Using peripherals such as Jaz drives,

printers, and scanners was as simple as it is in Windows 95 running on an Intel chip. Using a modem or local network also was a breeze, although you'll probably need a system administrator or an Internet service provider help technician to set up TCP/IP, as this is one of the more difficult things to do on a PC. Both programs support games based on 3Dfx Interactive's chipset if you have the TechWorks Power3D card installed.

The only time either program hit a compatibility snag was with some games and multimedia-rich reference discs, and the problems occurred almost exclusively during sound playback. Setting up sound in SoftWindows can be difficult initially, but Virtual PC had sound problems more often, distorting audio in the games Quake II, Jedi Knight, and BattleZone. One other compatibility issue that is likely to creep up is the right-button click on a Win 95 mouse. SoftWindows' workaround is command-R; Virtual PC allows you to shift-click.

Virtual PC and SoftWindows are fairly evenly matched in speed, achieving about Pentium 90 performance on high-end 604e and G3 machines. Performance varied quite a bit among applications and tasks, though, so no direct comparison to a Pentium chip is possible. Because it's so easy to dispute benchmark results, I used a 200MHz 604e to run each emulator through a few tasks that Mac owners might need to perform on a PC. The first was to transform the bitmaps of 46 cast members in Director from a 32-bit Mac to a 16-bit Windows color palette in a 36MB media file. From the instant I issued the Transform Bitmap command to completion, the time elapsed was 1 minute, 45 seconds for SoftWindows and 1 minute, 49 seconds for Virtual PC.

Next, I used the same Director project to create a Projector file. SoftWindows did it in 32 seconds, Virtual PC in 34, and a Pentium 166 in 22. Other tests included launching

graphics- and Java-intensive Web pages from the C drive in Microsoft Internet Explorer, compressing and decompressing files in WinZip, and running filters in Photoshop. In every case, Virtual PC and SoftWindows performances were separated by only a few seconds, with SoftWindows finishing slightly ahead.

Both programs also have a useful quick-start feature. By saving the Windows environment from RAM to your hard drive when you quit, you can skip the long OS load process the next time you run the program. Unfortunately, this quit-and-save-the-OS-environment command is misnamed TurboStart in SoftWindows. TurboRestart would have been a better choice.

You'll get good emulation performance out of a 604e machine, but Virtual PC and SoftWindows are significantly faster on a G3, which knocks 20 percent or more off the times for most actions. SoftWindows 95 and Virtual PC With Windows claim to run on any Power Mac with a 180MHz or faster 603, but anything less than a 250MHz 603 simply is too slow.

Virtual PC and SoftWindows are remarkably similar in performance, speed, and compatibility, and can even access each other's C drives. If you need to use Windows software on your Mac, it's hard to go wrong with either of these products.—Rick Sanchez

## TechWorks Power3D

**S**o you're a game-starved Mac owner and want to play PC games without buying a PC. Virtual PC and SoftWindows 95 may have an answer: they'll run titles based on 3Dfx Interactive's Voodoo chipset if you have the TechWorks Power3D card installed.

Virtual PC gives Power3D support right out of the box. Just install games and go. One problem you may encounter is the small initial size of Virtual PC's C drive because most games take up 100MB or more. You'll need to either resize the C drive and then reinstall Windows and the Virtual PC extras, or create a second one with a larger capacity.

To run 3Dfx-based games in SoftWindows 95, you'll need the version 5.0.3 updater (free download available at Insignia's site), a 5MB SoftWindows upgrade disc, and the Power3D Windows drivers. Unless you choose the largest C drive capacity, you'll have the same problem with drive space as in Virtual PC.

Right-button clicking is a frequently used mouse function in PC games, so if you're serious about PC gaming on your Mac, invest in a two-button mouse as well.

### Virtual PC 2.0 With Windows 95

**GOOD NEWS:** A fantastic interface. Improved speed and hardware compatibility. 3Dfx support. **BAD NEWS:** Still has sound problems with some games. The most recent 3D action games run too slowly.



### SoftWindows 95 5.0

**GOOD NEWS:** Improved speed and compatibility. Audio support. 3Dfx support. **BAD NEWS:** Sound problems. Poor interface.





## WEBPAINTER 3 ANIMATION SOFTWARE IS READY...AND IT'S SPECTACULAR!

WHETHER YOU ARE LOOKING TO  
MAKE YOUR ARTISTIC MARK ON THE  
WORLD  
OR JUST WANT TO DESIGN  
THE COOLEST,  
ATTENTION GRABBING,  
WEB ANIMATION POSSIBLE,  
YOU WILL WANT TO KNOW  
EVERYTHING ABOUT  
WEBPAINTER 3.  
IT'S SPECTACULAR!



**THE UNVEILING  
JULY 8-10  
MACWORLD NY**

VISIT US IN BOOTH #1453

**totally hip**™  
Software Inc.  
www.totallyhip.com

Sales:  
1.888.884.3447  
E-Mail:  
sales@totallyhip.com 1.800.213.6356

Recipient of PEI Cool<sup>2</sup> Award for  
"Most Desirable Imaging Products of 1996 & 1997"



# reviews

## Test Strip 2.0.2

### GRAPHICS & SOUND

**COMPANY:** Vivid Details

**CONTACT:** 800-948-4843 or 805-646-0021,  
<http://www.vividetails.com>

**PRICE:** \$149 (SRP)

**REQUIREMENTS:** PowerPC, System 7.1 or later,  
Adobe Photoshop 3.0.5 or later (or any program  
supporting Adobe Photoshop plug-ins), 1MB of  
application RAM (in addition to the RAM needed  
for Photoshop)

**V**ivid Details' Test Strip describes itself as "Photoshop Variations on steroids," and that's a good description. This Adobe Photoshop plug-in mimics the test strips used in film photography, in which the developer breaks up an image into segments, applying different exposures and colors to each. Photoshop's Variations offers almost the same thing, but Test Strip provides much more flexibility and is enhanced by its ability to generate a test proof of a sectioned image quickly.

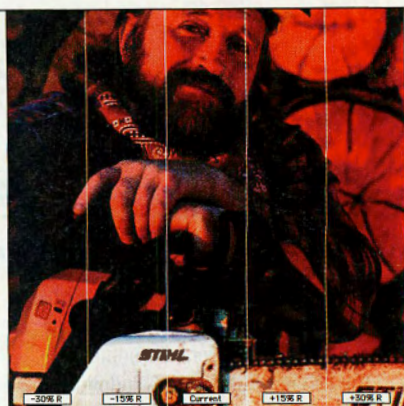


**FIND A TRIAL  
VERSION of  
Test Strip on  
The Disc.**

Test Strip 2.0.2 is faster and provides more control than version 1. It features a nine-up display (nine views of an entire image instead of one image divided into segments) and a new Flip Layout button that lets you quickly switch which attributes are on each side of an image. Test Strip's multiple undos are now handled in a new Edit Task List window, which lets you selectively undo specific actions from a list of all the changes you



**TEST STRIP'S NINE-UP DISPLAY** looks a lot like Photoshop's Variations, but it offers more fine-tuning capability and the option of creating a test proof of these thumbnails.



**LIKE ITS NAMESAKE film technique, Test Strip dices up a photo into various color attributes.**

made while working in Test Strip. Other 2.0.2 additions include a Dynamic Range button, which enables you to set the darkest and lightest pixels as white and black points automatically, and support for Photoshop actions for batch processing multiple photos.

Test Strip's biggest advantage over Variations is its Make Test Proof function, which creates a file of the sectioned image. You can send this file to a service bureau for a test print or show it to a client for approval. Make Test Proof is especially handy when you combine it with the nine-up display; it quickly generates a page of nine thumbnails, each with a slightly different color or exposure. Just make sure the name you give the test proof is different from the original file's, or all you'll have is the test proof when you save it.

Another advantage Test Strip offers over Variations is the ability to control the amount of change per section in increments of 1 percent. Variations uses only more/less and fine/coarse options. Test Strip also lets you zoom in on files, rotate which color changes appear in which strip, and look at all your changes side-by-side with the original image.

If you don't use Photoshop's Variations, you probably won't care for Test Strip. In the end, the plug-in offers only enhancements to that feature. Test Strip's ease of use and intuitive interface make it great for those who want more power.—Robert Capps

**GOOD NEWS:** Creates a proof for testing a printer or to show to a client. Better control than Photoshop's Variations. **BAD NEWS:** Is only an improved version of Photoshop's Variations.







## NUpowr G3 1400 upgrade

### HARDWARE

**COMPANY:** Newer Technology

**CONTACT:** 316-943-0222, <http://www.newertech.com>

**PRICE:** 216MHz card, \$750; 250MHz card, \$1,100

**REQUIREMENTS:** PowerBook 1400

**D**rool over a PowerBook G3 no more. Those of you who read the fine print when the 1400 shipped about two years ago realized that Apple had crafted an easily upgradable machine. Installing RAM in a 1400 is a breeze, and now, thanks to Newer Technology, you can own one of the fastest laptops on the planet. This upgrade provides a shocking increase in speed for those of you who think your 1400 might be getting a bit long in the tooth.

First, you have to install the upgrade yourself. A dealer could do it for you, but

there's no reason to pay for that. Installation is easy; it took me a whopping 10 minutes from start to restart. The manual is clear and provides the information you need to get up and running (though the bit about the warranty not covering damages resulting from surgical implantation made me wonder what kind of coffee the lawyers at Newer-Tech drink).

With the upgrade card installed, your PowerBook will boot faster. Try launching a few applications, and you'll understand what all the fuss is about. NewerTech also includes two extensions and a control panel to help you manage your new CPU. The G3 Extension enables the backside cache, which accounts for much of the G3's vaunted speed. If you disable this extension, the 1400 will feel like it's crawling through mud. Motorola designed the second extension, LibMoto, to give G3's a boost in their math processing. Although LibMoto isn't required, I did detect a slight difference in speed when doing a 3D-rendering test.

**MUTATIS, MUTANDIS! With this CPU card, a PowerBook 1400 becomes a G3.**

Overall, you have every reason to invest in this upgrade. With a G3 PowerBook running between \$2,300 and \$5,500, you can't beat NewerTech's price. Also, the G3 from Apple comes with only 512K of backside cache. The best of Newer's configurations comes with 1MB of backside cache, outperforming Apple's best and brightest PowerBook. On the other hand, the only reason not to upgrade is that you'll still be using a 1400: its CD-ROM drive may be too slow, or you may no longer like its passive matrix monitor. One hindrance to high-end users is the maximum RAM amount of 64MB. However, compared with the value of this easy upgrade, this limitation can definitely be overlooked.—*Scott Love*

### Good Idea, Bad Idea

**Good Idea:** Install the upgrade on a surface free from static, cats, little brothers, lightning storms, water, and grape jelly.

**Bad Idea:** Rub the upgrade card on a shag carpet for 10 minutes before installation to see what happens.

**Good Idea:** Wash your hands first, and don't use a magnetic screwdriver.

**Bad Idea:** Pull the little sticky pad off the top of the CPU because it looks like packing material. (It's not. It transfers heat from the chip to the heat sink.)

**Good Idea:** Install the upgrade far from your monitor and other computer equipment.

**Bad Idea:** Break out the nacho dip when your upgrade arrives. It's a coincidence that *upgrade chip* and *potato chip* sound similar.

**GOOD NEWS:** Save lots of money on a PowerBook G3. Installation is a snap. Dust off your BookCovers, the 1400's back in style! **BAD NEWS:** It costs more than your 1400 is worth right now.



### Surgical Ops

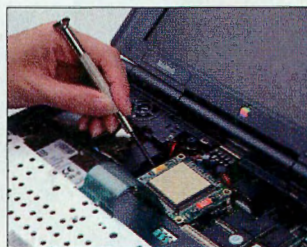
First and foremost, read the installation manual. This how-to isn't a substitute for thorough preparation. Be sure to remove the PowerBook battery before you begin installing.



**1** Remove the grille just above your keyboard, and pop up the keyboard. Lift it out carefully.



**2** Unscrew the metal plate and the heat sink (in silver). Keep the screws in a safe place.



**3** Unscrew and pull the CPU from the motherboard socket—give it to your kid brother to play with.



**4** Push the G3 into the socket; follow steps 1 and 2 in reverse.

Photos by Aaron Lauer





## QuickTime 3.0

### GRAPHICS & SOUND

**COMPANY:** Apple Computer

**CONTACT:** 800-795-1000 or 408-996-1010, <http://www.apple.com/quicktime>

**PRICE:** \$29.95 (SRP)

**REQUIREMENTS:** 68020 or faster, 8MB of RAM; Power Mac, 16MB of RAM; System 7.0 or later

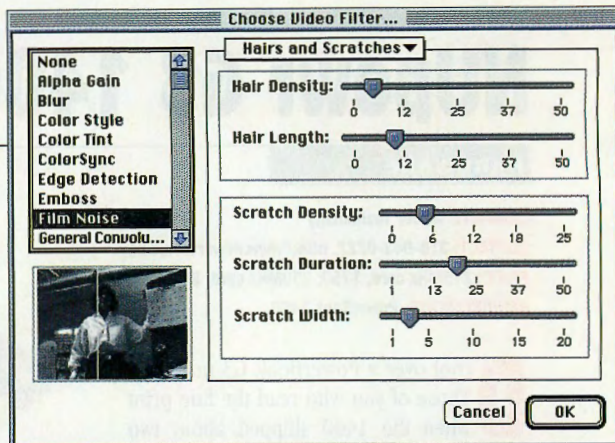
**Q**uickTime 3.0, the latest incarnation of Apple's industry-standard media software, has major new goodies with its outstanding mix of features. However, Apple has ended the free movie ride we've been enjoying since QuickTime arrived in 1991.

There are two flavors of QuickTime 3: a free version you can get from Apple or elsewhere, and a Pro version you can unlock from the standard version with a \$30 key, purchased from Apple, that you enter in the QuickTime control panel. Sure, you can coast with the freeware, but you'll miss most of QuickTime's new functionality—as well as some features that were in version 2.5—if you don't pony up for QuickTime 3 Pro.

Perhaps the most important reason to move to either version of QuickTime 3 is support for additional file formats. You can import Windows AVI movies and MPEG files, among others. We were able to open an AVI file directly in MoviePlayer

and use it in another movie without any further alteration. Any format that QuickTime 3 supports is recognized by QuickTime-aware applications—we successfully imported a JPEG image into Adobe After Effects, which does not come with a JPEG import plug-in. After Effects read the file as a one-frame movie. With QuickTime 3 Pro, you also can export movies in these formats and generate streaming video for fast playback on the Web.

The new Sorenson Video compression, which Apple licensed from Sorenson Vision, is another reason QuickTime 3 is a hit. Meant to replace Cinepak, the dominant codec used on the Web and CD-ROMs, Sorenson claims superior image quality, playback, and file-size compression. You can expect smoother-looking movies that compress in less time.



ONE OF MOVIEPLAYER'S new abilities is to add filters such as blur, emboss, or film grain to movies as they are compressed.

### Quick Tips for QuickTime

**Keep a copy...** of MoviePlayer 2.5.1 even after you install the standard version of QuickTime 3. It has features that were cut from MoviePlayer 3, and you can use it to modify any QuickTime 3 movie.

The big difference between QuickTime 3 Standard and Pro is obvious in MoviePlayer 3.0. Apple has deactivated all the editing and exporting features available in MoviePlayer 2.5.1 with Goodies and Authoring Extras installed, and you can't get them back or access MoviePlayer 3.0's cool new features without that \$30 key.

What exactly do you get with QuickTime 3 Pro? The new exporting features, for one. MoviePlayer 3 exports to the aforementioned file types, plus a bunch of other Windows formats such as WAV (for sound) and BMP (for images). It also can export a new QuickTime movie with different compression settings and codecs, doing away with the necessity of using another program such as Terran Interactive's MediaCleaner Pro to recompress a movie.

QuickTime 3 is a worthwhile upgrade for any Mac user. And we definitely recommend the Pro version if only to get that stupid movie off your desktop.—Raf Anzovin

## Cinepak Versus Sorenson

**W**e compressed a movie with both Sorenson and Cinepak compression at 30 frames per second and found that at medium compression the Sorenson codec yielded superior image quality, without the blocky, blurry Cinepak compression artifacts. The Sorenson file size was also significantly smaller—8MB compared with 10.5MB for Cinepak—and it compressed 25 percent faster. Cinepak still rules in playback frame rate. Despite the smaller file size, the Sorenson movie dropped more frames, perhaps because the Sorenson codec was optimized for the G3, and we ran these tests on a 604e.



AT MEDIUM COMPRESSION, blocky and blurry Cinepak artifacts become quite noticeable.



IN CONTRAST, the Sorenson codec at medium compression looks nearly as good as it does at high compression.

**GOOD NEWS:** Improved file import and export. DV and Sorenson compression. New MoviePlayer abilities in Pro version.

**BAD NEWS:** The standard version installs promo movie. Standard MoviePlayer is crippled. Pro version costs money.



PRO

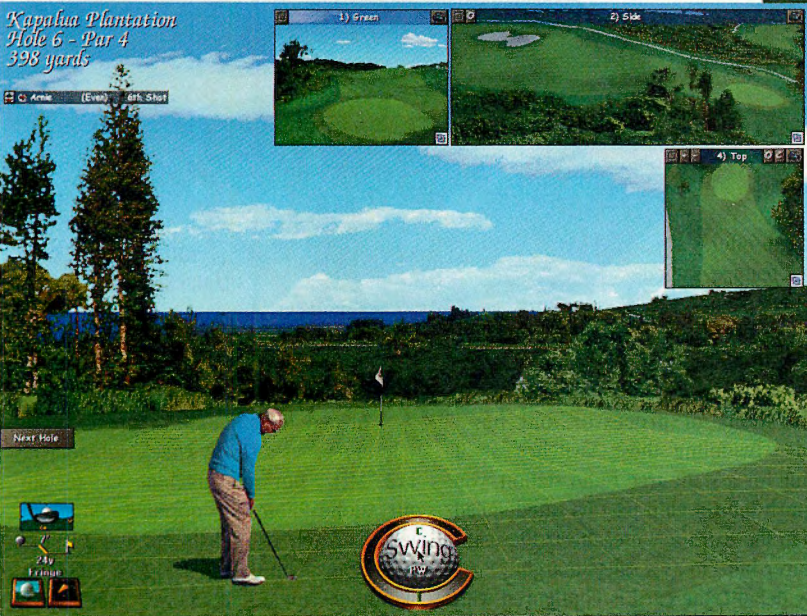
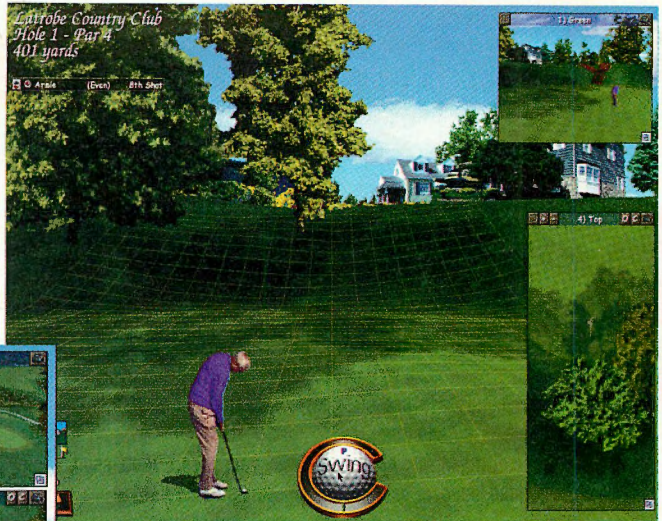


STANDARD

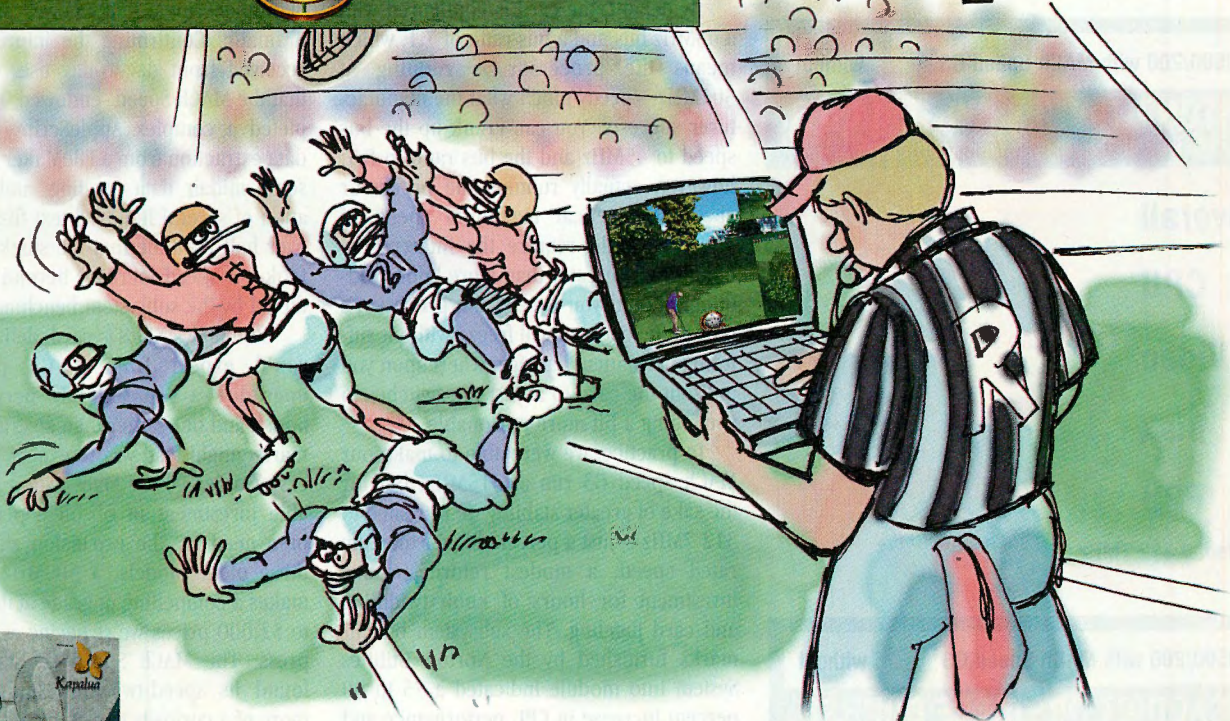


# LinksLS

## Macintosh

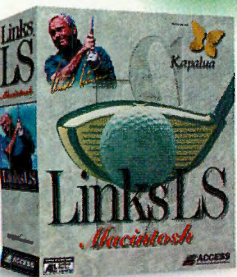


Real Life  
**PALES** by  
Comparison



Take a 20-minute Links® break and challenge Arnold Palmer to 18 holes at Kapalua's Bay Course on Maui.

- Multiple viewing windows
- 16.7 million colors
- 4 golfers including Arnold Palmer
- Faster screen redraws
- Supports all previous LINKS courses
- Many other new features



**ACCESS**  
SOFTWARE INCORPORATED





# reviews

## MACH Speed G3

### HARDWARE

**COMPANY:** XLR8 by Interex

**CONTACT:** 316-636-5544, <http://www.xlr8.com>

**PRICE:** \$1,999 (SRP)

**REQUIREMENTS:** Apple Power Mac 7300, 7500, 7600, 8500, 8600, 9500, or 9600; Power Computing PowerWave or PowerTower; Umax SuperMac J700 or S900



Photo by Aaron Lauer

As surely as night follows day, the unveiling of a new PowerPC chip by the dynamic duo of IBM and Motorola is followed by a slew of processor upgrade cards sporting the new processor. This time around, one of the first accelerator vendors to ship the new silicon is the appropriately named XLR8, a subsidiary of Interex. Incorporating a 300MHz PowerPC 750 and 1MB of backside cache (running at two-thirds the processor's speed), XLR8's MACH Speed

G3 card offers a bonus feature called Multiple Variable Processing. This means the upgrade card sports a couple of little knobs you can twirl to try out various combinations of processor and bus speeds. Twiddling these switches as if hunting for a static-free radio station, you can push the G3 chip past its rated speed and tap the extra few megahertz the manufacturer built in as a safety margin.

By default, the card is configured with a 43MHz bus and a bus ratio of 7:1, which means the processor is running at 301MHz—pretty much what the manufacturer suggests. You can crank up the bus speed to 45MHz and the bus ratio to 8:1; however, actually running the processor at the theoretical maximum speed of 360MHz would require the intercession of a miracle greater than mere knob twiddling. Should you exceed the processor's limits, the machine will freeze without suffering permanent damage, whereupon you pull out the card to adjust the switches to something a bit more reasonable.

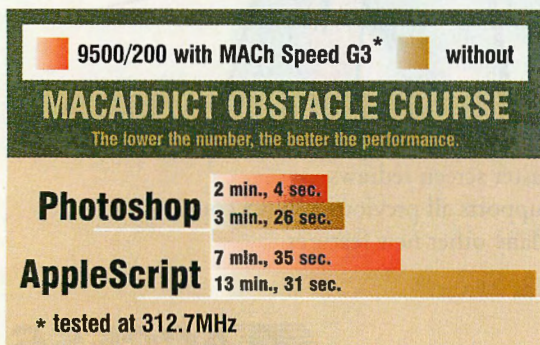
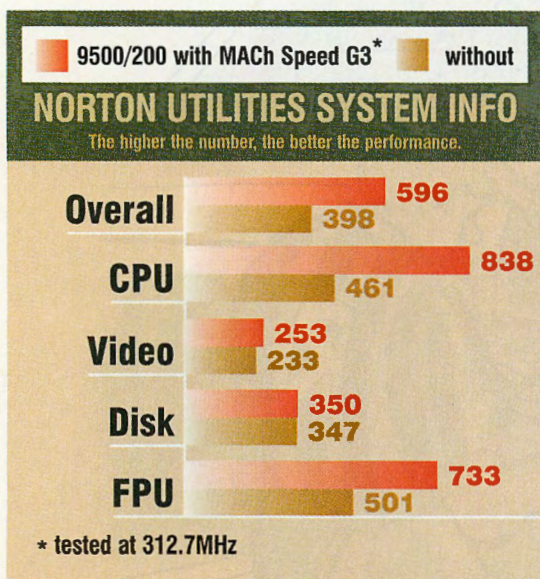
In practice, we were able to make our MACH Speed G3 run at 315MHz, but for the sake of greater stability we retreated to 312.7MHz—just 4 percent higher than the rated speed, a modest return on our investment for hours of knob twiddling and card juggling. The subsystem benchmarks furnished by the Norton Utilities System Info module indicated a 75 to 80 percent increase in CPU performance and an FPU speed-up of 40 to 50 percent, with the benchmark results directly proportional to the processor clock speed. Video and disk performance, unsurprisingly, were unaffected. At the G3's practical maximum speed, our stock Power Mac 9500 received a 50 percent boost in overall performance.

**YOU CAN'T MOCK the MACH Speed G3 card, a compelling upgrade.**

Given the inherent vagaries of subsystem benchmarks, we turned to a couple of application-level tests as a reality check. Running at 312.7MHz, our test machine completed our Adobe Photoshop obstacle course in approximately two-thirds the time it took in pretransplant days. The speed increase in AppleScript execution was even more dramatic. Confirming the impression we received from day-to-day use, we found that the MACH Speed-endowed 9500 completed a complex AppleScript (involving data extraction from a FileMaker database, some midair data juggling, and the creation of several hundred text files) in just over half the time that the stock machine took—a speed increase beyond that predicted by the subsystem benchmarks.

Ultimately, XLR8's card delivers what you'd expect from a G3 processor upgrade—a substantial performance boost, and one larger than abstract benchmarks might lead you to expect. For owners of older Power Macs with a considerable investment in obsolete peripherals, or a need for the expansion afforded by these older models, a 300MHz G3 card makes a compelling upgrade at the \$1,500 to \$2,000 prices we're seeing as we go to press. The MACH Speed G3, though we found its speed-tweaking feature to be more of a curiosity than a must-have, is no exception.—Mark Simmons

**GOOD NEWS:** Substantial real-world performance boost for Power Macs. Hours of knob-twisting fun.  
**BAD NEWS:** Exciting speed-adjustment feature yields minimal performance benefit. Costs as much as a low-end Power Mac G3.





# Ever Wish You Could Get Back a Project You Lost? You Can.

**Aladdin FlashBack™ gives you instant access to all your previous versions.**

## **FlashBack your work and you're protected.**

Protected against loss by accidental deletion, file corruption, even from hitting the save key and overwriting your file.

Aladdin FlashBack is a whole new way to protect your files.

*With FlashBack you can recover not only lost or damaged files, but even previous versions of files that you changed, even if you made the changes months ago.*

## **Unlimited undos**

Discover the power and time savings of unlimited undos. FlashBack tracks changes made to a file every time you hit Save. Recover from changes even after you've quit your application, turned your computer off and gone home. If you ever saved a FlashBacked file, you can recover it exactly as it was at that time.

## **Works on any file**

If your application saves files, FlashBack will protect you. From word processors to graphics programs, from databases to spreadsheets, from HTML to C++.

## **Instant file recovery**

Restore any file you've protected just by double clicking. No confusing procedures, no complex operations. It doesn't get any faster



or easier. Plus, FlashBack works equally well with both local and networked files.

## **Save Disk Space**

Keep multiple versions of your important files without gobbling up disk space. FlashBack makes only one complete copy of your file. Previous versions are tracked through tiny "diff" files containing only the changes, or differences, between one version and the next. The result? You can save five, ten, twenty or more versions of a file in less room than you would use hitting 'Save as' just a couple of times!

## **Time & Date Stamping**

FlashBack time and date stamps each version it saves, making it the organized alternative to cluttering up your folders with cryptically named 'Save as' files!

It's a new level of protection. Beyond backup. Beyond file recovery. FlashBack gives you a whole new way to protect your files and save your sanity.



(800) 732-8881 [www.aladdinsys.com](http://www.aladdinsys.com)

© 1998 Aladdin Systems, Inc. All trademarks are property of their respective owners.





# reviews

## Musicshop 2.02

### GRAPHICS & SOUND

**COMPANY:** Opcode Systems

**CONTACT:** 800-557-2633 or 650-856-3333, <http://www.opcode.com>

**PRICE:** \$149 (SRP)

**REQUIREMENTS:** 68000 Mac: 68020 or faster, System 7.0 or later, 8MB of RAM;  
Power Mac: System 7.5 or later, 16MB of RAM, QuickTime 2.5 or later, MIDI  
interface and instrument (recommended)

Getting into computerized music composition can be scary. The big note-editing and sequencing suites are as complex as 3D animation programs and, with their profusion of tiny controls, seem more geared for audio engineers than for musicians. Opcode's Musicshop 2.02 combines MIDI music recording and note editing in one easy-to-use program that's the best available for casual songwriters and students. It also gives serious musicians adequate power while offering a streamlined interface for composition.

Once you've configured the hardware—you need a MIDI instrument, such as a MIDI keyboard, and a MIDI interface plugged into your Mac's serial port—you run a MIDI setup program, then move to the main Musicshop window. Set the tape-deck-style controller to Record, play the MIDI device, see your tune transposed to the screen in standard notation (including thirty-second, sixteenth, eighth, quarter, half, and whole notes, plus dotted notes and triplets), then press Play to hear what you recorded. Slight modifications of this process can aid learning—for example, you can play parts slowly or note by note, then play back the result at a faster tempo.

Edit notes in the notation window by cutting and pasting, changing notes, and employing other techniques. Or edit the music graphically in the "piano-roll" view, which lets you spot and fix rhythmic errors (using quantization), wrong pitches, and other mistakes, and add expression with pitch bending and vibrato. You can print professional-looking sheet music, with title, tempo, and composer headings, in whole or in parts for ensemble playing.

New features in version 2.02 include 32-track multichannel recording—16 each for two MIDI interfaces. (You may need both the modem and printer ports for this trick.) A 32-track mixer lets you set the parameters for each track and do automated mixdowns.

The original Musicshop's main shortcoming was its lack of support for QuickTime Musical Instruments and for a broader range of MIDI features. Opcode has built QuickTime support into Music-

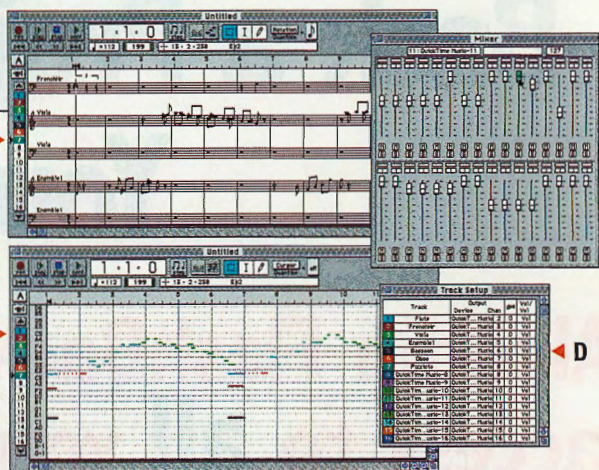
shop 2.02, which now also includes the full General MIDI name set. You can import and export Standard MIDI files and play MIDI compositions back on a Mac.

Unfortunately, Opcode has some bugs to fix. I set off two separate system bombs in less than three minutes by altering Musicshop's OMS settings and MIDI track assignments. Musicshop also needs multiple levels of Undo, or at least a Revert to Saved option.

Aside from occasional instabilities, Musicshop is a great beginner-to-intermediate composition tool. —Steve Anzovin

**GOOD NEWS:** Simple, easy-to-use notation. Supports QuickTime Musical Instruments and General MIDI. Plays back from your Mac.

**BAD NEWS:** Bugs need squashing. No Revert.



(A) See your music play in the notation window.

(B) Mix channels and levels in the Mixer.

(C) Use this graphic "piano-roll" view for easier editing.

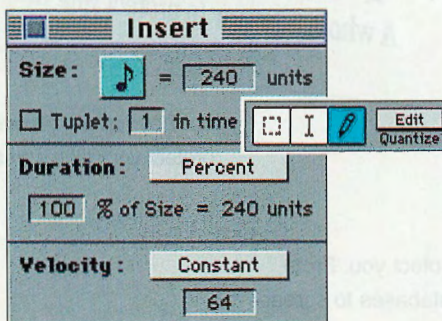
(D) View and edit your track setups and MIDI virtual instruments.

## Edit a Note

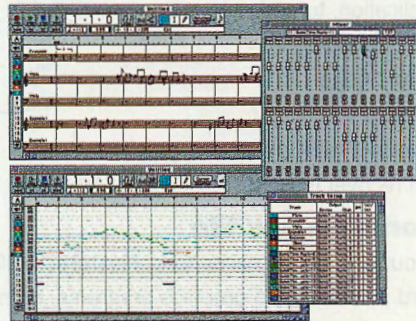
Who needs a MIDI keyboard when you can write music the old-fashioned way (by hand)? Here's how to add a quick extra note to an existing composition.



**1** In Musicshop's notation window, find the measure you want to edit.



**2** Double-click the pencil tool to see the Insert box. Select the type of note you want to add, such as an eighth note.



**3** Place your note and click to fix it there; it even comes in with the proper rests to maintain the beat.



# Unreal<sup>TM</sup>

Beyond Definition  
Beyond Comprehension  
Beyond Imagination



(actual gameplay screen)

Completely original engine, ruthless AI, hyper-realistic environmental effects, portals, and an endless multiplayer universe of user created, hot linked levels...welcome to the Bermuda Triangle of the galaxy



westlake  
INTERACTIVE

Coming Soon...

MacSoft<sup>®</sup>

An Affiliate of GT Interactive Software

[www.wizworks.com/macsoft](http://www.wizworks.com/macsoft)





## OmniPage Pro 8.0

### PERSONAL PRODUCTIVITY

**COMPANY:** Caere Corporation

**CONTACT:** 800-535-7226 or 408-395-7000, <http://www.caere.com>

**PRICE:** \$499 (SRP); \$129, upgrade/sidegrade

**REQUIREMENTS:** PowerPC, System 7.5 or later, 10MB of RAM, 25MB of free hard disk space, scanner

**Q**wertuiop! If that sequence makes you blanch, you probably hate to type or have too much typing to do. Caere wants to spare you from repetitive stress injuries with its new version of OmniPage Pro, the best-selling Mac optical character recognition (OCR) package. Version 8 adds some neat tricks that should appeal to the business and multiculti crowd while improving on the program's legendary accuracy in turning scans of documents into editable text.

And the name of the game in OCR definitely is accuracy. You don't want to run a series of pages through your scanner and OCR software and end up with text riddled with bizarre errors. OmniPage Pro boasts the highest accuracy of any popular OCR app—a clearly scanned laser-printed document with a simple layout stands a good chance of being recognized with 99 percent accuracy.

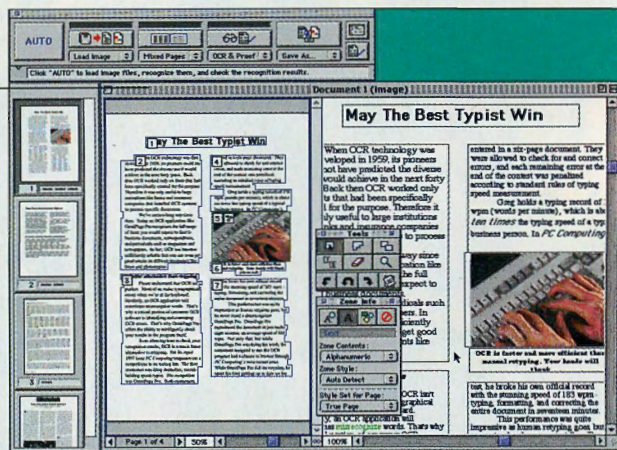
That means you've still got a few errors to correct. OmniPage Pro makes finding and fixing them easy. The OCR Proofreader, which churns through the document flagging potential errors, shows them in context and suggests corrections. The window is a model of design that all spelling checkers should emulate. The whole process, from scan to save, is streamlined and efficient—a single click on

the AutoOCR Toolbar takes you through it.

Most documents aren't simple one-column things. OmniPage Pro can handle multiple columns, inset text boxes, color art, and fonts in multiple sizes, colors, and styles. However, complexly formatted docs often come through with imperfect results—we found that OmniPage Pro occasionally inserts empty lines and adds text stylings where there were none.

The interface hasn't changed much from version 7; most new features are under the hood. OmniPage Pro 8 now recognizes text as small as 4 points and can deal handily with that OCR bugaboo, skewed scans. It can deskew pages up to 10 degrees off vertically, which is really crooked, and does a good job on thermal faxes and other degraded text.

Another valuable feature, especially for standard business OCR, is Numeric Mode, which identifies parts of a document containing only numerals, as in a spreadsheet table. Once the area is tagged, the OCR engine can do a more accurate, faster job of recognizing numerals than it would if it followed the standard algorithm for letter recognition.



**OMNIPAGE PRO PROVIDES the best OCR accuracy money can buy—with a clear interface that's easy to use.**

This version deals better with foreign languages in roman character sets, a fact that should warm the hearts of language diversity advocates (or anyone who's doing business overseas). It contains rule sets for 12 western European languages, including Spanish, German, French, Italian, Dutch, Brazilian Portuguese, Scandinavian languages, and British English. OmniPage Pro can handle an occasional umlaut or accent grave, but don't try diacritic-heavy languages such as Hungarian.

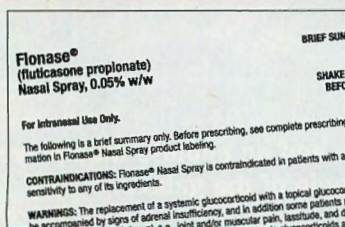
Without a doubt, OmniPage Pro 8 is the best OCR solution for the Mac. Pair it with a good scanner—especially one with auto-feed capability—and your typing days are numbered.—Steven Anzovin

**GOOD NEWS:** Best OCR accuracy money can buy. Easy to use. Handles color, multiple languages, crooked scans. **BAD NEWS:** Sometimes messes up page formatting.

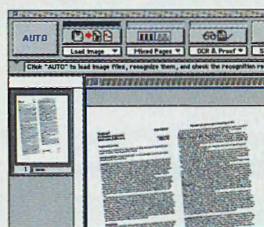


## OCR Torture Test

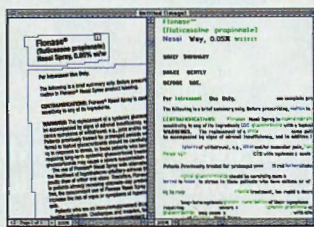
We tested OmniPage Pro 8 on a scan from hell to see how it handles truly nasty OCR situations.



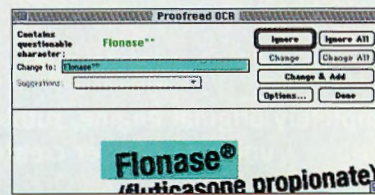
**1** A section of the TIFF file of the original scan—10 degrees off-kilter, tiny 4-point type, double columns, lots of tech words, and worst of all, scanned from a thermal fax.



**2** The OCR & Proof function processed the imported file in about five minutes on a pokey 120MHz Power Mac.



**3** OmniPage juxtaposes the before and after versions for comparison. Potential errors are flagged in color. Those spaces look bad, but much of the text is accurate.



**4** The proofreading feature in OmniPage Pro works extremely well. It's still a whole lot easier than typing all that text!



Some people think that Norton Utilities for Macintosh is the most advanced troubleshooting utility in the world.



Not quite.

TechTool Pro 2 checks more aspects of your Macintosh than any other utility available. Besides repairing and recovering damaged drives (including those with the new HFS+ format), you can also test all those other critical parts of your system that our famous competitor ignores like RAM, CPU, floppy drives, scanners, modems, internet connections, CD-ROM drives and much, much more.

However, just because TechTool Pro is the most advanced Macintosh troubleshooting utility available doesn't mean that it's difficult to use. In fact, we've added an easy-to-use interface that makes checking and fixing your Macintosh a snap. For the advanced user, our expert mode allows you to control and configure TechTool Pro in almost any way you wish.

**TechTool Pro 2: Because you've got better things to do with your time than waste it on a broken computer.**

MicroMat Inc.  
800-829-6227  
707-837-8012  
FAX: 707-837-0209  
info@micromat.com  
www.micromat.com



Fix different.™





# reviews

reviews

## Action Files 1.0

### CONFIGURATION

**COMPANY:** Power On Software

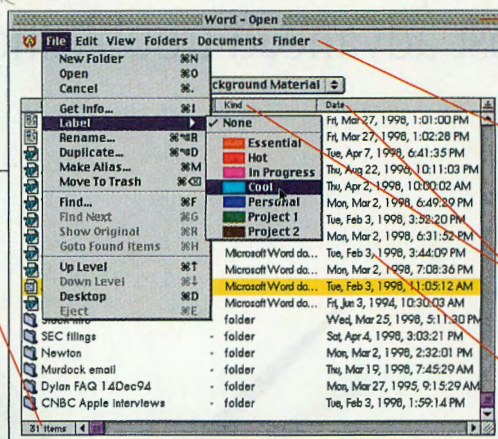
**CONTACT:** 800-344-9160 or 330-735-3116,

<http://www.actionutilities.com>

**PRICE:** \$49.95 (SRP)

**REQUIREMENTS:** Color-capable Mac, System 7.5

Indicates number of items displayed.



Drag the title bar to move the dialog box.

This menu bar appears in all Open and Save dialog boxes.

Notice the new columns available.

Determine the font and text size used in lists.

**B**uy Action Files. It adds wonderful new features to two of the most frequently used elements of the Mac OS: Open and Save dialog boxes. You encounter them every single day, yet Apple hasn't touched them since 1984.

With Action Files, Open and Save dialog boxes are movable and resizable, so you can see what's underneath them and display more items in the scroll lists. Instead of just showing file names, you can add columns for Size, Kind, Label, and so on, and you can sort by whatever you like. The font and text size in lists also are customizable.

To help you locate items of interest, Action Files offers a full-blown Find command for ferreting out files buried deep in a drive. Or if what you want is visible in the background—such as an open window, hard drive icon, or tabbed window—just click it, and the dialog box updates to show what's there. The utility also tracks recently opened files and folders and makes these available both from a menu within the dialog box and from the Open submenu in most applications.

If all this isn't enough, there are options for renaming, duplicating, and trashing items;

creating new folders and aliases; and getting info—all within the Open and Save dialog boxes! Best of all, everything works flawlessly, thanks to a robust compatibility module that takes into account the quirks of most major programs.—Owen W. Linzmayer

**GOOD NEWS:** Boosts productivity. Adds much-needed features to Open and Save dialog boxes. Simple.

**BAD NEWS:** Apple doesn't include this in the Mac OS.



FIND A TRIAL VERSION of Action Files on The Disc.

## StyleScript 3.7

### COMPATIBILITY

**COMPANY:** InfoWave

**CONTACT:** 800-663-6222 or 604-473-3600, <http://www.infowave.net>

**PRICE:** \$99 (SRP)

**REQUIREMENTS:** 68020 or faster; System 7.1 or later; 16MB of RAM; CD-ROM drive; one of several Apple, Canon, Epson, or Hewlett-Packard printers

**T**here's one feature that divides printers into haves and have-nots—PostScript. Most inexpensive ink-jet printers are decidedly in the have-not category. After all, it's not cheap to add PostScript interpretation hardware to a printer, and the expense of licensing PostScript adds to the printer's cost, so if you're not willing to pay the premium, you won't get a PostScript-capable printer. That is, unless you buy StyleScript. StyleScript brings Adobe Level 2 PostScript capability to a range of Mac-compatible ink-jet printers through a software-based PostScript interpreter, and it does a fine job.

Installing StyleScript is easy. Just run the installer, choose the appropriate printer driver, and restart. Then select the StyleScript driver in the Chooser, and you're ready to print EPS files with a mere command-P.

StyleScript does what it claims without many difficulties. The program's biggest problem isn't the printer driver at all. StyleScript installs an automatic registration program that asks you to register StyleScript every time you start your Mac until you either complete the registration process or remove the registration program from the Startup Items folder. The routine quickly



**NOTICE THE SMOOTH** lines and stunning expression on Mozart's face with the StyleScript driver. StyleScript produces rougher but more accurate gradients than the Epson driver's.

becomes irritating. But that's the worst we can say about this product.

StyleScript is a great way to bring PostScript to an inexpensive color ink-jet printer. As a low-cost way to print color EPS images, StyleScript is a smart alternative to shelling out hundreds of dollars for a new PostScript-capable printer.—David Reynolds

**GOOD NEWS:** Does exactly what it says it does. Speedy performance. Handles color well. **BAD NEWS:** Limited non-Apple printer selection. Annoying autoregistration setting.





# DEER HUNTER

INTERACTIVE HUNTING EXPERIENCE

#1 PC Game  
Coming to the  
Mac this July



## The Thrill of the Hunt

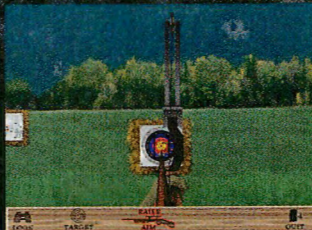
Live video and animated sequences  
for true-to-life gameplay



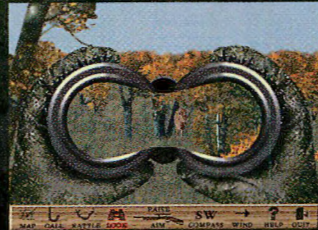
Overhead map shows exact location



Choose your weapon: rifle, shotgun or bow



Use the tools of the trade  
to track a trophy-sized buck



800-229-2714

Call for a free catalog or visit our website at:  
[www.wizworks.com/macsoft](http://www.wizworks.com/macsoft)

SUNSTORM  
INTERACTIVE

©1997, 1998 Sunstorm Interactive

MacSoft®

An Affiliate of GT Interactive Software, Plymouth, MN 55441





# Dramatica Pro 3.0

PERSONAL PRODUCTIVITY

**COMPANY:** Screenplay Systems

**CONTACT:** 818-843-6557, <http://www.screenplay.com>

**PRICE:** \$149.95 (SRP)

**REQUIREMENTS:** System 7.0 or later, 8MB of RAM, 20MB of free hard disk space

Any dramatic writer can tell you the hard part isn't physically writing a novel or script, it's creating compelling characters and situations that make the work worth reading. Dramatica Pro uses the Dramatica writing theory to externalize the creation of your novel or screenplay through extensive analytical and development tools. Hopefully, the result is a well-structured and deep story.

Dramatica Pro is marketed in two distinct packages. One, Dramatica Pro, is aimed at novelists. The other, Movie Magic Dramatica, targets scriptwriters. The two programs are identical except for installation and setup preferences.

Before you jump into Dramatica Pro to produce either a script or a novel, you have to understand the Dramatica theory of storytelling. If you don't accept this theory from the beginning, Dramatica Pro won't do you any good. The program functions on the premise that every story is constructed of a finite set of elements. By defining and mastering these elements, you can arrange them into a perfectly constructed story. According to the Dramatica theory, every story must have four viewpoints, four types of plot, and four through-lines. Dramatica Pro helps you identify and refine these in your own fiction.

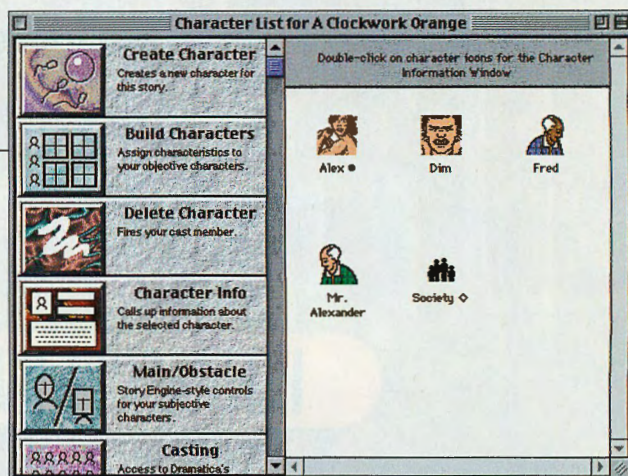
Sound complicated? It is. The Dramatica theory alone could be the subject of a

semester course, but with Dramatica Pro, it will probably take a week or two to get started. If that sounds like a long time, it shouldn't—consider the time that most writers take to create the characters and stories that make their novels and screenplays credible.

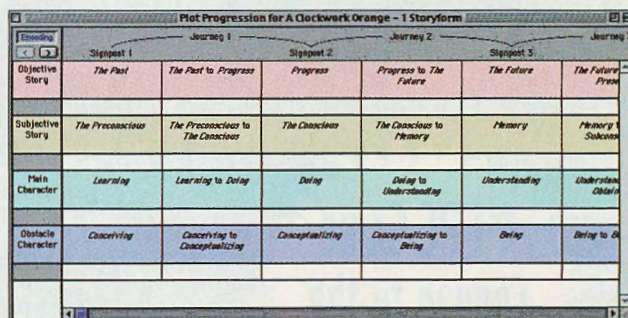
Dramatica Pro helps you on several levels. Before you start your project, you will find it useful to explore Story Analysis and Comparisons. This section allows you to parse classics such as *Casablanca* and *To Kill a Mockingbird* using the Dramatica theory. Seeing familiar characters and story lines broken down will help you think analytically about your own story. Once you're ready to start working on your manuscript, you can jump to the development tools. The first process you'll go through is the Story Guide, part of Dramatica's query system.

The Story Guide takes you through a series of pathways that help you smooth out your structure, characters, and story points. With a rudimentary structure in place, you'll move on to the areas where you'll spend the most time: Story and Character building tools.

The Character tools are the most useful ones. Dramatica Pro breaks down each character into basic building blocks of purpose, motivation, evaluation, and methodology. You get to know characters intimately and to



**THE CHARACTER BUILDER**, where you'll spend a great deal of time, allows you to refine your characters' motivations, personalities, and places in the narrative structure.

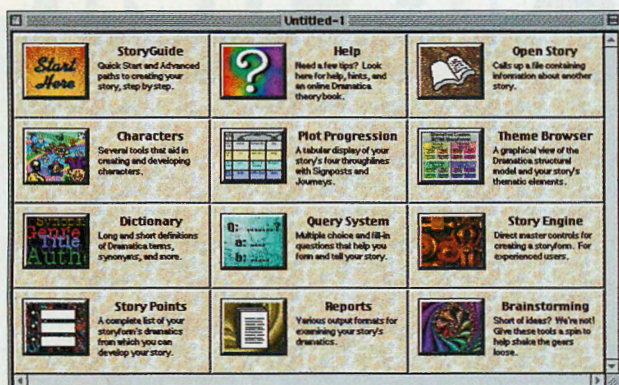


**ONCE YOU ESTABLISH** the characters, themes, and story lines in your project, the Plot Progression tool gives you a road map to write your work.

create realistic responses and actions based on the personality you've developed.

With your characters in place, the Story Engine, Plot Progression, and Theme Browser help you determine the elements of your story and the relationships of characters, plots, and themes. What sets this application apart from simply drafting everything on paper is that Dramatica Pro provides tables and graphs revealing your story's progression. The screen display allows you to see where you missed connections or failed to include one of the four viewpoints, plots, or through-lines.

Dramatica Pro is not a tool for dilettantes. You need to come equipped with a plot and characters. But if you have a story to tell or a novel or screenplay to fix up, Dramatica Pro helps you analyze and improve your work by filling in the missing pieces.—Rick Sanchez



**THE DRAMATICA PRO TOOL PALETTE** gives you instant access to its most commonly used functions.

**GOOD NEWS:** Extensive instruction in Dramatica theory. Excellent character-, plot-, and theme-development tools. **BAD NEWS:** You must come up with a compelling drama on your own. Steep learning curve.





# SPOTLIGHT ON CREATIVITY

JULY 7, 1998: PRE-CONFERENCE WORKSHOP & REVENUE EVENT • JULY 8-10, 1998: EXHIBITS  
JULY 8-10, 1998: MACWORLD/PRO CONFERENCE AND MACWORLD EXPO USERS CONFERENCE  
JACOB K. JAVITS CONVENTION CENTER • NEW YORK, NEW YORK

**Macworld**  
**EXPO**  
*the Creative World*

With the right tools and the right team, you can build what you can dream. Create and communicate daring new concepts. The doors are wide-open, technology is changing, and everything is possible.

## Break new ground in creativity in New York City

Everything's evolving this year. MACWORLD Expo enters the Big Apple in style. Come to the center of the creative universe, home of Silicon Alley, for the industry's foremost market event. Hear hundreds of fresh ideas for:

- Graphic design, commercial art and advertising
- Publishing and printing
- Education, research and development
- Motion picture, video and multimedia production
- Web site design and navigation

**MACWORLD Expo-the Creative World** is your opportunity to learn about the latest issues and technologies in these areas, including new operating systems and cross-platform applications. Meet industry experts and make essential connections. And take away the blueprints for a creative new world.

Owned by:

 **IDG**  
WORLD EXPO

Sponsored by:

**Macworld MacWEEK**

Managed by: **IDG Expo Management Company**

Act now to reserve your place at  
**MACWORLD Expo-the Creative World**

1. Visit [www.macworldexpo.com](http://www.macworldexpo.com) or

2. Call **800-645-EXPO** or

3. To receive more information,  
complete the coupon on the right.

☐ **YES!** Tell me more about MACWORLD Expo '98 in New York.  
I'm interested in ☐ Attending ☐ Exhibiting

**ADD**

Name \_\_\_\_\_ Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Phone \_\_\_\_\_ email \_\_\_\_\_

Mail to: MACWORLD Expo, 1400 Providence Highway, P.O. Box 9127, Norwood, MA 02062

Fax to: 781-440-0357

**THIS IS NOT A REGISTRATION FORM**





## Pax Imperia: Eminent Domain

FUN & GAMES

**COMPANY:** THQ

**CONTACT:** 818-591-1310, <http://www.paximperia.com>

**PRICE:** \$49.95 (SRP)

**REQUIREMENTS:** PowerPC, System 7.5 or later, 16MB of RAM, 2X CD-ROM drive, 256-color 13-inch monitor

The original Pax Imperia, a Mac-only game released in 1993, stole days away from our pre-MacAddict lives. It was amazing, and just the promise of Pax II, ever present in the annals of vaporware, was enough to make us drool. Five years later, Pax Imperia: Eminent Domain is finally here for the Mac and Windows. Was it worth the wait? Sorta. Eminent Domain delivers a worthwhile romp in space-empire management, but it misses the mark in a few key places.

For those of you who missed the first version, Eminent Domain is a game of space conquest and empire management in which you colonize distant star systems, design starships,

negotiate with alien races, and direct massive armadas as they attack competing empires. The game is played in real time (new to the genre)

with your starships flying, colonies building structures, and research continuing all at once. We made judicious use of the pause button, which, thankfully, still allows you to issue commands and scrutinize the myriad of screens at your leisure.

Eminent Domain differentiates itself from other space strategy games—most notably Master of Orion II—in its pacing. Worlds develop far more quickly than in any other game of its ilk, so you aren't stuck waiting for populations to grow as they queue, say, a tiny escort ship to be built in 10,000 years. This faster pace lets you colonize more quickly, start and conclude wars early in the game, and easily establish solid production bases. Eminent Domain allows you to dive right in.

Eminent Domain disappoints in one critical area, however. Up to 16 people can play in networked competition (TCP protocols are supported for Internet play and are the only option for LAN play on the Mac), but you can't save or pause the game in this configuration, as you can in single-player mode. Good luck if you need to visit the restroom or answer the telephone. And if a machine crashes or you suddenly lose a connection, you will be forced to abandon a sprawling



**THOSE THREE RED BLIPS on the radar will not see another day. They picked the wrong planet.**



**FOR THE ANAL-COMPULSIVE gamers out there, designing your own ships is a blast. Here's a cruiser with serious frontline firepower.**

impossible to really enjoy a network game.

Eminent Domain also missteps in its automated building and tech research. Because there is so much going on in the game, the designers automated the building queues and research selections, so it's not necessary to keep an eye on all aspects of your empire. Although it provides a nice hands-off approach, the program goes a bit too far. In some ways, the game almost plays itself.

Eminent Domain is a welcome addition to the Mac game market, but we expected more after waiting five years for the Pax Imperia sequel. It's a fun single-player game, but if you are looking for multiplayer action, stick with Bungie Software Products' Myth or try MacSoft's Master of Orion II.—*Scott Love*

**GOOD NEWS:** Good pacing. Nice graphics and sound. Solid one-player game. **BAD NEWS:** Too automated. Interface is a chore. No save for network games.



### Imperial Tips

**Anaerobic & Subterranean** characteristics are ideal for your first game. They let you colonize any planet.

**Orbital defenses** are the key to surviving. Build them early to protect your young colonies.

**Watch out for maintenance costs!** Your empire's income can quickly turn negative with too large a fleet for your space briches.

**To get a summary** of all the planets in a solar system, click on the sun.

**Never colonize red worlds.** They're unsuitable and will devour taxes for years.

**Keep transport ships ready** behind front lines. When new technology or a war opens up new worlds for colonization, you'll beat the other empires to the punch.

**Fighter bases** are your friends, especially early on.

**Be the first to build a cruiser.** These star fleet staples pay off handsomely if you deploy them early.

empire in which you may have invested hours of work. These stupefying oversights make it just about

**THE ANIMATION AND ART** make for a great time watching colonies grow.







## The Journeyman Project 3

### FUN & GAMES

**COMPANY:** Red Orb Entertainment

**CONTACT:** 800-474-0485 or 415-382-4400, <http://www.legacyoftime.com>

**PRICE:** \$49.95 (SRP)

**REQUIREMENTS:** PowerPC, 80MHz or faster, System 7.5 or later, 16MB of RAM, 70MB of free hard disk space, 4X CD-ROM drive

**L**egacy of Time is the third installment in The Journeyman Project series. In all three games, you play as Gage Blackwood, Agent 5 of the Temporal Security Agency, a secret organization set up by the World Government to protect the world from those who would destroy it by abusing time travel. In the Journeyman universe, changes made in the past ripple through time as shockwaves, altering history and changing the present. In the original Journeyman Project, you successfully defeated Elliott Sinclair, the inventor of time travel, in his attempt to prevent Earth from accepting the alien Cyrollan invitation to join the Symbiotry of Peaceful Beings, a galactic collective of races. In part 2, Buried in Time, you were framed by the rogue Agent 3 for crimes you didn't commit. You proved your innocence, but at the last moment, Agent 3 escaped and was presumed lost in the time stream.

The latest chapter of the saga opens in the year 2329. A Symbiotry spacecraft on a

routine patrol is destroyed by a mysterious alien fleet. As you watch in horror, the Cyrollan captain of your ship murmurs, "They have returned...."

Back on Earth, you receive a message from Agent 3. She has discovered big trouble in the past, which will result in the destruction of the present. To stave off catastrophe, you need to travel back in time to the lost cities of Atlantis, El Dorado, and Shangri-la. There, you'll retrieve the Legacy, an archive of high technology left behind by a master race—and eagerly sought by both the Cyrollans and their adversaries.

Legacy of Time, with its rich story and beautifully rendered 3D environments, does a wonderful job of immersing you in the Journeyman world. Throughout the game, full-motion, noninteractive video sequences advance the plot and introduce characters. You travel through time in the Chameleon Jumpsuit, which lets you assume the guise of the different characters you encounter in your travels. This facade allows you to talk to characters in order to solve puzzles and find the Legacy. Arthur, a wise-cracking artificial intelligence sidekick, accompanies you in the suit. Throughout the game, he gives you background information, provides clues, and keeps up a constant stream of

**WELCOME TO SHANGRI-LA. All you have to wear is the guise of Genghis Khan.**



**CAN WE TALK?** This Atlantean is one of 20 characters you meet. Your AI pal, Arthur, is at the lower right.

sometimes painful jokes. The interaction with Arthur and the other characters gives the game a vastly different—and more human—feel than do games such as Myst and Riven, with their gorgeous yet eerily uninhabited worlds.

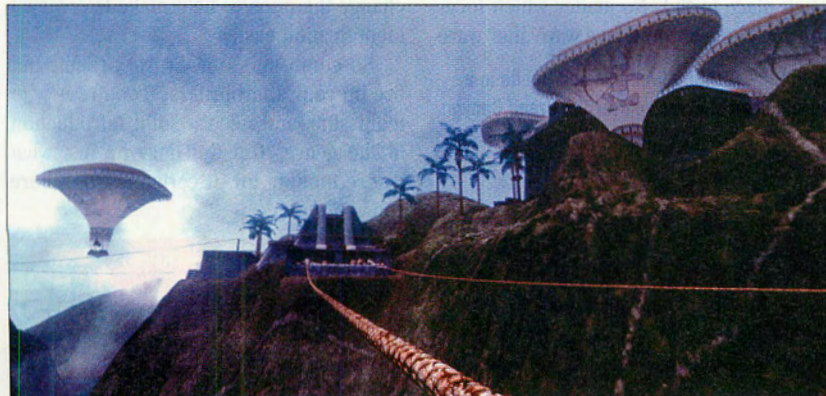
The freedom of movement and sense of immediacy you get as a player are amazing. The view from your jumpsuit is like that of a letterboxed film: you can turn through a smoothly scrolling 360-degree panorama as well as look up and down. The game's interface (the inventory of objects you acquire, controls to travel to different time periods, and so on) is always available but never intrusive. The puzzles you have to solve in each time period are challenging, but if you eat adventure games for breakfast, you'll probably get through Legacy of Time without breaking a sweat. Unlike in the previous installments, your character can't die in Journeyman 3, so you're never rudely jolted out of the game.

Many adventure games have bragged that they provide a cinematic experience, but most of them are unbalanced in terms of either whiz-bang gameplay at the expense of a solid story or an overly intricate plot in which all the player can do is slog from place to place. The Journeyman Project 3: Legacy of Time delivers on the cinematic promise.—Tom Negrino

**GOOD NEWS:** Excellent video sequences. Naturalistic interaction with other characters. Beautifully rendered worlds. Great player movement. **BAD NEWS:** The puzzles may be too easy for hard-core gamers. Occasional overpowering urge to strangle the game's AI sidekick.



**NOT YOUR ORDINARY HERO.** That's you, the intrepid Agent 5. Show us your acting.







# Top Gun: Fire at Will

## FUN & GAMES

**COMPANY:** MacSoft

**CONTACT:** 800-229-2714 or 612-509-7600, <http://www.wizworks.com/macsoft/>

**PRICE:** \$44.95 (SRP)

**REQUIREMENTS:** PowerPC, System 7.1 or later, 16MB of RAM, 32MB of free hard disk space, 2X CD-ROM drive

**S**o you'd like to be Tom Cruise for a couple of weeks? Here's your chance. MacSoft's new flight sim for the Mac, *Top Gun: Fire at Will*, whisks you off to Top Gun Naval Weapons School in Miramar, California, where you'll train against the best Navy pilots in the country.

A good story accompanies the action. Like Tom Cruise in the movie, you are Maverick, a gutsy pilot with more raw, natural talent than good sense. You and your radar

man, Merlin, fly the Grumman F-14 Tomcat, one of the hottest combat fighter jets in the world, and you practice a wide range of recon flights and bomber escort duties, and engage in a screaming flood of killer close-quarters dogfighting.

But the star of this game isn't the story, it's the action. *Top Gun* is a curious hybrid, in a way. The game is an excellent introduction to the flight-simulation genre. It has all the rousing flight and fury needed to make it interesting to a newcomer, without bogging you down in the aerodynamic subtleties of the more complex flight sims. It may not be sophisticated enough for veteran game fliers, but there's enough hot combat to keep even the most jaded jet jockeys hunched over their joysticks.

You get more than 40 fast and furious fighting missions on two CDs. You can work your way through the tough tutorial sessions at Miramar, learning the rules of air combat through intense and increasingly difficult training exercises. Or you can plunge right into hot global warfare by selecting Instant Action, a collection of 30 or more fighting scenarios scattered around the world.

One of these Instant Action offerings is a wild and woolly entry called *Endless Enemies*. You get your choice of eight battle sites, including Cuba, Korea, Libya, Miramar, and even the Grand Canyon (a tough place to fly). No matter which location you choose, you'll face wave after wave

**MAVERICK CHASES** Wolfman and Hondo in a twilight combat exercise over the Grand Canyon.



**A MISSILE LAUNCH** not only is indicated by the track of the missile visible from your cockpit, but it also appears in a screen to the right of the instruments.

of enemy aircraft. You can't win this one. They'll keep coming after you until they shoot you down or you abort the mission. Then you'll get a score to show how well you did—points for every enemy plane you destroy, minus points for every missile you fire (just to keep you from blasting away indiscriminately).

The graphics are somewhat inconsistent. Many details are nicely rendered—planes, missiles, clouds, seashores, and aircraft carriers. But the terrain graphics can vary from the gorgeous crags and channels of the Grand Canyon to pixelated brown and green sludge in some of the flatter areas. The background music comes from Kenny Loggins' "Danger Zone," rerecorded from the *Top Gun* movie soundtrack; it's nice for a while, but it tends to get repetitious over a long course of fighting.

There are some neat extras packed into the game. A View Object device lets you take a close look at friendly and enemy aircraft. Not only do you get a written description and a voice-over narrative detailing each aircraft's characteristics, but you also can rotate the aircraft and change the pitch to help make later visual identification easier.

So climb into Tom Cruise's G suit and fire up your afterburners. If you're new to flight sims and need a solid introduction to the genre, *Top Gun* may be just what you're looking for. It certainly won't bore you.—*John Lee*



**YOU'LL GET** plenty of chances to try your luck at landing on a pitching, postage-stamp-size carrier deck.

## Tips: Seek and Destroy

**Switch on autopilot:** It will lead you to mission objectives. Don't leave it on when engaging the enemy. For better control, fly yourself—or you'll burn.

**Learn to use HUD (Heads-Up Display):** This essential instrument will give you readings on weapons, target info, airspeed, pitch, and altitude. Also use the AN/AWG-9 radar.

**Choose your weapons selectively:** Each missile has its purpose. Don't waste any.



**GOOD NEWS:** Nice story line. Helpful tutorials. User-friendly manual. Rich variety of missions. Good introduction to flight sims. **BAD NEWS:** Repetitive music. Some boring terrain graphics.





# Mac Picasso 540

## MacPaloma

TV, Video In  
4 Channel Audio In  
Audiomixer

**\$169<sup>95</sup>**

designed by



**VILLAGE  
TRONIC**

## MacPablo

Video Out

**\$119<sup>95</sup>**

## MacPicasso 540

4MB, Gamma correction  
1152 x 870 in True Color  
MPEG Acceleration

**\$224<sup>95</sup>**

Voted by MacADDICT  
May/98:



**FREAKIN' AWESOME**



MacMagazin 1/98  
Germany

Macwelt  
TESTSIEGER

MacWelt 4/98  
Germany

MacMagazin 9/98  
Germany

★★★★★  
MacCasey 1/97  
Germany

★★★★★  
MacUser 2/97  
UK

★★★★★  
MacCasey 3/97  
Germany

Macwelt  
TESTSIEGER

MacWelt 5/97  
Germany

★★★★★  
MacUser 8/97  
UK

Macwelt  
TESTSIEGER

MacWelt 11/97  
Germany

★★★★★  
MacWorld 11/97  
France

Macwelt  
TESTSIEGER

MacWelt 9/98  
Germany



## 3D Overdrive

8MB 3D memory  
3 graphics processors  
3D res. up to 1600x1200

**\$379<sup>95</sup>**

## MP 540 & 3D Overdrive

4 processors  
12 MB

**Bundle price \$549<sup>95</sup>**



## Other Graphic boards

MacPicasso 523	PCI	2MB	\$99.95
MacPicasso 340	NuBus	4MB	\$339.95
MacPicasso 320	NuBus	2MB	\$249.95

**«...one of the slickest pieces of engineering we've seen.»** (MacADDICT May/98)

**«The Village Tronic 540+3D Overdrive combo offer the best of 2D with the best of 3D. Everything is perfect or near perfect: video is fast, 3D is fast, 2D is fast, documentation is good, installation is easy.»** (www.tikkabik.com • 3/98)

**MacADDICT CD includes:**

- Light Version of THE VILLAGE POST
- New Hardware drivers
- Product information
- Manuals
- Developer support
- detailed technical infos
- Reviews
- Shopping guide

Software Hut Inc.  
313 Henderson Drive  
Sharon Hill, Pa. 19079  
1-800-932-6442 **ORDERS**  
1-610-586-5706 **Fax**  
1-610-586-5703 **Info**  
email: Village@softhut.com  
www.softhut.com/mac

Artifice, Inc.  
creative tools for spatial design  
1342 High Street Building  
Eugene, Oregon 97401  
toll free: 8002038324  
voice: 5413457421  
Fax: 5413457438  
www.artifice.com

Manufacturer:  
Village Tronic Marketing GmbH • Germany  
Tel.: +49 (0)5066-7013-0  
Fax: +49 (0)5066-7013  
e-mail: sales@village.de  
Wellweg 95 • 31157 Sarstedt  
www.villagetronic.com

School, Government and Fortune 1000  
Purchase Orders Accepted • Dealer  
Inquiries welcome email  
macsales@softhut.com  
or call 800-848-0079





# power up

When you want to go to the next level with your Mac, we'll take you there.

## GRAPHICS & SOUND

### How to Create Realistic Images With Illustrator

by Dave Prochnow (with art by Kathy Prochnow)

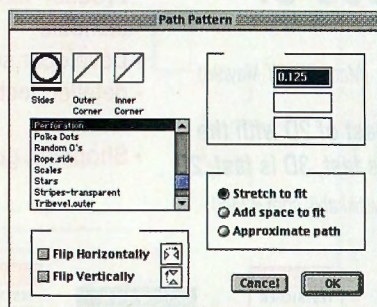


THE DISC  
CONTAINS  
a blank,  
perforated-  
stamp-outline  
file in Illus-  
trator format.

**A**re you sick and tired of purchasing postage stamps that aren't worth a lick? Do you wish your pictures could adorn the walls of the local post office (other than those FBI Most Wanted pics, that is)? Well, there is a way to "go postal" without arming yourself. All it takes is an ounce of design inspiration and Adobe Illustrator. With these easy tips, you can help stamp out mediocrity and turn your first-class dream into a philatelist's reality. Getting started merely takes some basic familiarity with Illustrator. Check out these six tips and make your Illustrator drawings just a bit more realistic.

The finishing touches for your stamp should include the name of the issuing country and the denomination. Add this text with the type tool. You can edit, size, move, color, check for spelling, and even shape your placed type. Shape the type by converting each letter to an outline. But be forewarned: type you've converted into an outline is no longer a typeface, so you can't edit it easily. Other than this minor inconvenience, Illustrator's flexibility in type manipulation offers some distinct creative advantages over bitmap-based applications.

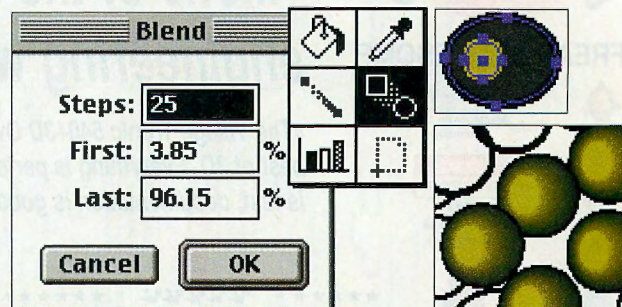
Also, be aware that not everyone is an Adobe Illustrator convert. Some illustrators march to the Macromedia FreeHand drumbeat; these diehards claim that FreeHand is Illustrator on steroids. FreeHand has the Smudge, Roughen, and 3D Rotation Xtras, but basically, it follows the Illustrator mold, so FreeHand users can utilize the tips in this article with impunity.



**1** To define the stamp's outline, you must make a perforated edge. Using a path pattern simplifies this task. First, define the small, 1/32-inch circle that represents one perforation. Second, draw one side of the stamp's rectangular outline. Now, select the line segment and apply the Path Pattern filter selection. Next, trim your perforated side with the Pathfinder Divide filter. Finally, duplicate the three remaining sides of the stamp and join the four edges together. You now have a blank stamp.

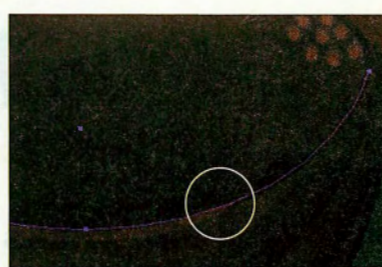
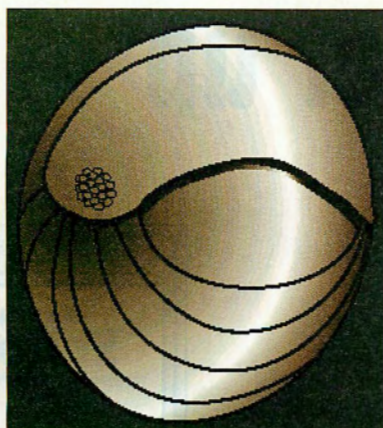
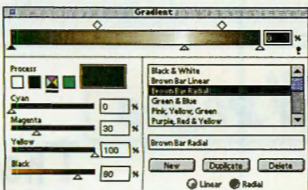
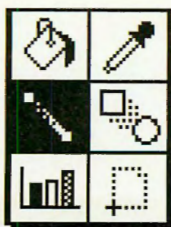


THE SUBJECT MATTER for this demonstration is from a fictitious postage stamp series titled "The Invertebrates of the United States." This example represents Isopoda, or pill bugs.



**2** When you want to make a smooth transition between two colors, apply the blend tool. In this case, a blended eyeball looks more realistic than a solid one. To create a blended eyeball using the blend tool, make two concentric circles with highlight and base color applied to the inner and outer circles, respectively. Next, enter a reasonable number of color steps and click OK to perform the blend. The result is a blended circle that looks like a sphere.

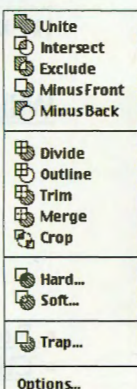




power up

**3** An alternative to the blend tool is the gradient tool. Using the gradient tool with the Brown Bar Radial gradient selected produces a decent 3D effect. The effect can be similar to a blend, but gradients make for smaller file sizes. Unfortunately, gradients also make our isopod look too metallic. To get around this, we'll have to use layered shapes for details in shadows and highlights.

**4** Colored shapes can be strategically placed to approximate highlights and shadows, producing an illusion of dimension and depth. These shapes don't have to mimic the exact shape of an adjoining surface; instead, you can take advantage of Illustrator's labels. Just use Send to Back and Bring to Front to manipulate these overlapping shapes into the proper position.



**5** Once you start layering shapes, you'll notice that colors become obscured, edges can get rough, and objects might need cropping. These editing tasks are performed by the Pathfinder filters, which work on two or more selected shapes. Pathfinder filters include Unite, Intersect, Exclude, Minus Front, Minus Back, Divide, Outline, Trim, Merge, Crop, Hard Light, and Soft Light. Just select the shapes that need a Pathfinder filter action, choose the proper filter, and your stamp is almost ready for posting.

**6** When the Pathfinder filters can't cut it, it's time to take out your knife tool and slice off the offending material. In this case, we used the knife tool to trim the right-hand edge of the isopod's side profile flush with the stamp's border. If you need a perfectly straight cut, hold down the shift key while you're cutting with the knife tool.

## Books Worth Drawing From

**M**any books are available to help smooth your Illustrator learning curve.

**The Illustrator 6 Wow! Book**, by Sharon Steuer (Peachpit Press, \$39.95, ISBN 0-201-88664-2).

**Illustrator 7 Complete**, by Jennifer Alspach, Kate Binder, Steven Frank, and Harry St. Ours (Hayden Books, \$45, ISBN 1-56830-364-5).

**Teach Yourself Illustrator in 24 Hours**, by Mordy Golding (Hayden Books, \$19.99, ISBN 1-56830-410-2).

**Classroom in a Book: Adobe Illustrator 7.0**, by Adobe Press (MacMillan Computer Publishing, \$45, ISBN 1-56830-371-8).

**Illustrator 7 Studio Secrets**, by Ted Alspach (IDG Books Worldwide, \$49.99, ISBN 0-76454-026-2).

## Stamp Submissions

**I**f you want to become an avid USPS postage stamp designer, you can send your suggestions, ideas, and sample designs to:

Citizens' Stamp Advisory Committee  
Attention: CTC  
United States Postal Service  
475 L'Enfant Plaza SW, Room 4474E  
Washington, DC 20260-2437

Don't think that your creative efforts will be in vain. There's some great potential for financial reward in postage stamp design. According to the *Graphic Artists Guild's Pricing and Ethical Guidelines Handbook, 9th Edition*, the USPS will pay up to \$3,000 per contracted image for a stamp commission.

## power up

### GRAPHICS & SOUND

Tired of the bland perforated paper that the U.S. Postal Service serves up? Here's how to roll your own postage design. p. 66

### DEVELOPMENT

Follow along as we dissect the San Jose Mercury News Web site to learn some of its secrets. p. 68

### FUN & GAMES

We have a sneak peek at two new gems from the leader in Mac shareware games. p. 70

### ASK US

Annoyed at AOL's constant badgering to get offline? Want to know how to turn WAV sounds into alert sounds? Read on, MacDuff. p. 72





## DEVELOPMENT

## Learn New Web Site Tricks From the Best of the Net

by Joseph O. Holmes

**The Page:** The Mercury Center welcome page (<http://www.sjmercury.com>), which greets visitors to the Web site of the *San Jose Mercury News*.

**The Designer:** Albert Poon, chief designer. JavaScript by Nick Heinle, Albert Poon, and Tim Colson.

**The Tools:** A mix of Macs and Wintel boxes. The site was created and is edited with text-editing tools—no WYSIWYG. The Mac tool of choice is Bare Bones Software's BBEdit (<http://www.barebones.com>).

**The Philosophy:** Chief designer Poon says the recent redesign focused on making the Mercury Center “faster, more consistent, attractive, compatible, and smart.”

**Things We Admire:** Graphics are used with a light touch, making the page load fast. And the site works consistently with all browsers because it uses no frames, plug-ins, or style sheets. JavaScript is used inconspicuously.

## JavaScript

When a visitor's mouse pointer passes over the links on this table of contents, a yellow triangle pops up next to each hyperlink, giving the column a tactile feel. The feedback helps visitors know which of these active links they're about to click.

To create the effect, a small JavaScript swaps a white spacer image—invisible against the white background—for a yellow triangle whenever the mouse pointer moves on or off the link.

If you're interested in learning JavaScript, start by studying scripts on the Web. To examine the Mercury page's script, select Document Source from your browser's View menu. Inside the page's header you'll see the script between the mandatory script tags:

```
<SCRIPT LANGUAGE = "JavaScript">
</SCRIPT>
```

The page first checks to see if the visitor's browser is JavaScript capable—Netscape Navigator 3 or later or Microsoft Internet Explorer 4 or later.

The first part of the script retrieves the visitor's browser name and version, then sets a variable to record whether the browser is JavaScript capable.

The rest of the script, starting from the word “if,” defines a couple of functions that point to the images “arrow.gif” and “white.gif.” These two functions set the stage for the image swapping, which happens farther down in the body of the HTML. Next month we'll be taking a look at the code that performs the image swap.

## The Quick Scoop on JavaScript

We'll discuss JavaScript on a semiregular basis in these pages, so here's a quick introduction. You've probably heard of Java, a sophisticated programming language that can create full-blown applications. A Web page can tell a browser to download a Java application, which runs like a small application on the visitor's computer.

JavaScript, on the other hand, is a much simpler scripting language designed to manipulate elements on a Web page. It can load and animate images, capture and display information, manipulate windows, and more. Two big advantages over Java: JavaScript is much easier to learn—if you've worked with AppleScript or a macro scripting language, it's a snap. And the code is contained completely within the text of a Web page, so even an ordinary home page on America Online can use JavaScript tricks.

HotWired's Webmonkey pages (<http://www.hotwired.com/webmonkey>) contain some excellent lessons in writing JavaScript.



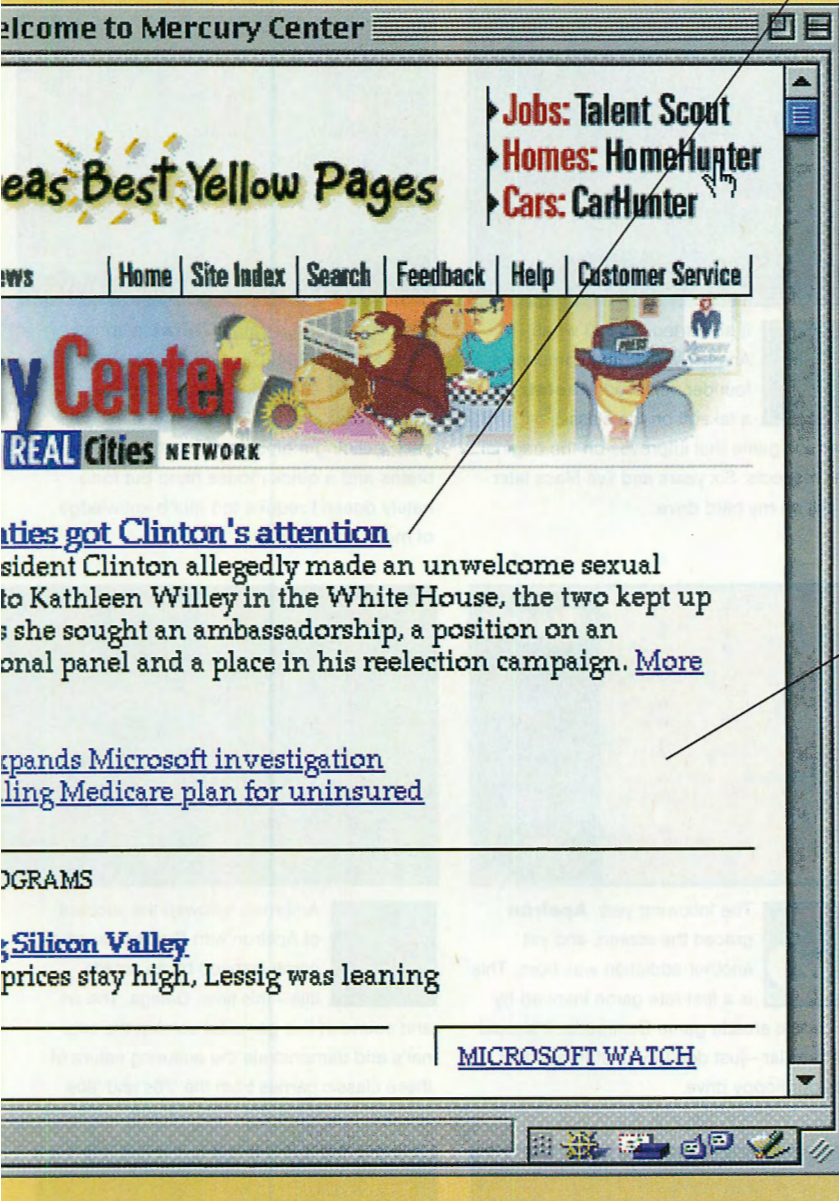
## Graphics

The Mercury pages use small graphic elements to keep the page loading fast. A good example are these section dividers, which give the whole site a cohesive design. Note that the headings are standard text, not a graphic—the designers use a neat trick to get the line to wrap around the text.

It's all done with three graphic elements—a horizontal line across the top, a separate vertical line at the left, and a spacer GIF to keep the text a bit to the right of the vertical line. Both of the lines are drawn using a single one-pixel-by-one-pixel black image. Here's how it works:

```
<IMG SRC="/graphics/black.gif" WIDTH="260"
HEIGHT="1" BORDER="0"><br>
```





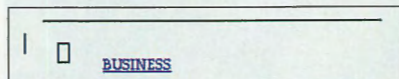
First draw the one-pixel-high horizontal line. The source of this image is "black.gif," a single black pixel. The image tag's width attribute stretches it to 260 pixels long. A break at the end moves the next line over to the left and down.

```
<IMG SRC="/graphics/black.gif" WIDTH="1"
HEIGHT="16" BORDER="0">
```

The vertical bar along the left uses the same single black pixel as above but stretches it to 16 pixels high.

```
<IMG SRC="/graphics/spacer.gif" WIDTH="6"
HEIGHT="16" BORDER="0">
```

A transparent spacer graphic sits between



THE COMPONENTS of the heading element.

the vertical line and the text, to keep a little space between them. This and all the spacer GIFs on the site are also a single square pixel; change their size by varying the width and height attributes.

```
<A HREF="/business/"><FONT SIZE="2">
BUSINESS</FONT></a>
```

Finally, the hyperlink—in this case, the word "BUSINESS"—sits to the right of the spacer.

## HTML

Creative use of basic, 1994-era HTML is just one way the Mercury Center maintains compatibility with the broadest range of browsers. News summaries are formatted with a *definition list*: Headlines are marked as definition terms `<dt>`, and indented paragraphs under the headlines are marked as definitions `<dd>`.

For clarity, mark a headline in bold or in a larger font size, as the Mercury page does, or add paragraph dividers `<p>`.

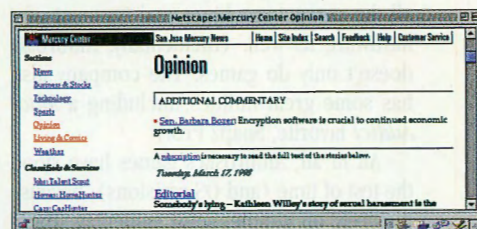
Remember that—as is the case with all lists—you must surround the entire list with opening `<dl>` and closing `</dl>` tags. Here's an example of the HTML:

```
<DL>
<DT>
<B><FONT SIZE=+1><A HREF="headline1.htm">
Volunteers working septuplet shifts
</A></FONT></B>
</DT>
<DD>
Happily outnumbered, Kenneth and Bobbi
McCaughy at least have plenty of help. The
McCaughys need 60 volunteers to help raise
the world's first surviving set of septuplets.
</DD>
```

## Design

The Mercury Center pages all use a plain, white background. Aside from giving the pages high legibility and the look of print on paper, a white background offers Web designers a couple of advantages. First, the pages are guaranteed to look identical across all platforms and browsers. And second, it's much easier for the designers to blend graphics into the background, because there's never a problem matching colors.

In addition to using a white background, the Mercury site presents a strong identity across all its pages by using the same typeface, identical design elements such as toolbars and headings, and consistent column arrangement. All pages are created using standard templates, and the designers and editors work from a detailed set of design stylebooks.



ALL THE PAGES share a common look, which gives the whole site a strong identity.

## Next Month

**A** look at more of the Mercury Center. If you'd like to see a particular Web page deconstructed, drop a line to Professor Web at professor.web@pobox.com. Please remember that the professor can't personally reply to every query.





## FUN & GAMES

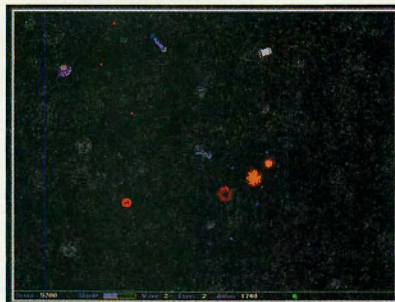
### A Bevy of Games from a Top Developer

Ambrosia Software  
800-231-1816 or 716-325-1910  
<http://www.ambrosiasw.com>  
by Scott Love

Are you tired of going to your local software store looking for games and finding nothing for the Mac but MacInTax? Get online. You'll discover a wealth of shareware and freeware games from virtually every genre waiting to be downloaded. And one of the best places to start is Ambrosia Software—one of the staunchest Mac game developers around. Ambrosia isn't your typical commercial software company. Instead of taking the factory approach and hiring a bunch of game designers and engineers, Ambrosia took the greenhouse approach and selected some Mac developers to work with, helping it turn out great games. The company then releases these games in the market as shareware—exceptionally high-quality shareware.

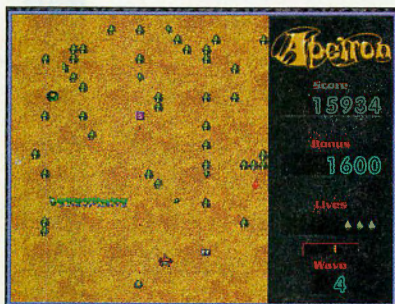
In its almost six years of existence, Ambrosia has won awards and worked with Apple; it also offers tech support and has an 800 number. All it needs now is an IPO. Ambrosia currently offers 10 games, most of them of the arcade variety, and has two more waiting in the wings that look promising. Ambrosia's games come at the right price—usually under \$25—and have been maintained as Apple has released new versions of the Mac OS. All the games work on all the current machines and on most past hardware as well. (Incidentally, Ambrosia doesn't only do games. The company also has some great utilities, including a *MacAddict* favorite, Snapz Pro.)

All in all, Ambrosia's games have stood the test of time (and OS revisions), because they rely on simple, solid gameplay. These games will keep you coming back for more, even after many commercial titles are collecting dust on your shelves. Here's a look at Ambrosia's gaming wares, plus a sneak peek at what's coming up for the premier Mac shareware game developer.

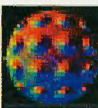


It all started in 1993 when Andrew Welch, the company's founder, released **Maelstrom**, a takeoff on the classic

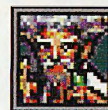
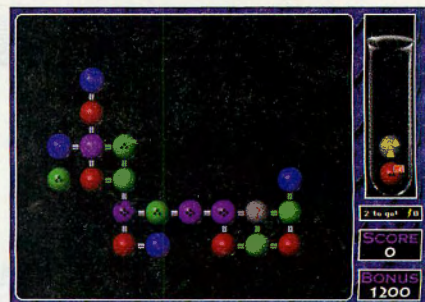
Asteroids game that improves on the original in all respects. Six years and five Macs later it's still on my hard drive.



The following year, **Apeiron** graced the screen, and yet another addiction was born. This is a first-rate game inspired by the classic arcade game Centipede. It should look familiar—just don't try to stuff quarters into your floppy drive.

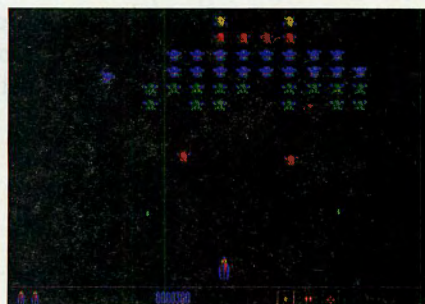


In 1996 Ambrosia released **Barrack**, an original title that's a cross between a puzzle and an arcade game. It involves isolating bouncing balls on the screen by slicing away horizontal and vertical strips of the game board. It tests how adept you are at visual geometry.

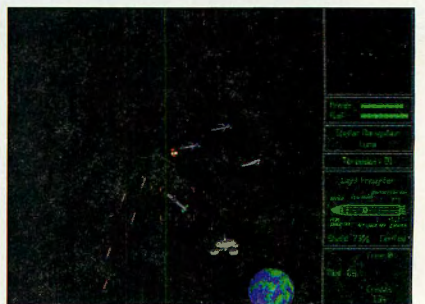


Then came **Chiral** in spring 1994. Chiral is a puzzle game similar to Tetris—it requires

players to work at a frenzied pace building molecules with atoms. It takes brains and a quick mouse hand but fortunately doesn't require too much knowledge of molecular chemistry.



Ambrosia followed the success of Apeiron with **Swoop**, another game inspired by an arcade title—this time, Galaga. The art and sound in this game far outstrip the original's and demonstrate the enduring nature of these classic games from the '70s and '80s.



A few months later Ambrosia released what is possibly its best game—albeit in a different genre—**Escape Velocity**.

Arcade elements and role playing combine to produce a sci-fi adventure game with days of play potential. Escape Velocity also has its own plug-in architecture.



FIND  
AMBROSIA'S  
GAMES on  
The Disc.



# Preview

## Escape Velocity Override

**E**scape Velocity fans, start salivating! Ambrosia's newest space-based offering, Escape Velocity Override, is a massive update to Escape Velocity that offers an all-new universe to play in, hundreds of different worlds to explore, and a plot that changes the landscape of the universe depending on the choices the player makes. This update is expansive and will draw fans of the game back for at least another few weeks of playing. Although much of the game's art is from the original game (which is disappointing), the overall project is promising. Just released, Escape Velocity Override is available on The Disc.

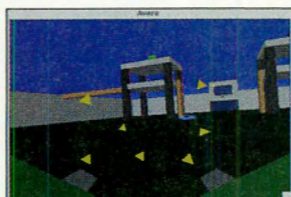


power up

# Preview

## Cythera

**F**ans of role-playing games have had a hard time fueling their addiction on the Mac recently, but Ambrosia is looking to step in and add one more option to the mix. Anyone who's played Fantasia's Realmz or Spiderweb Software's Exile series will be familiar with the game right off—players control a party of characters and their various statistics and equipment while they adventure in a fantasy land and battle monsters. Players may be put off by the game's dated graphics (isometric tiles of the kind used in other shareware offerings and nowhere near the quality of MacSoft's Fallout), but the story and subplots will draw in fans of the genre quickly. Check out <http://www.delver.com> for news on the game's engine as well as its progress. By the time you read this, Cythera should be out.



**Avara** followed next and opened up yet another genre for Ambrosia.

Avara is played almost exclusively online, where you pit your skills against humans, battling with tank-robots called Hectors. The game is well engineered, and even across the slowest 14.4 connections offers solid game-play. It doesn't compare with Myth, but if you're looking for something less strategic, try this alternative. Recapturing this fort will probably require a strategy slightly more subtle than barging in the front door.



**Bubble Trouble** was released near the end of 1996 and brought

Ambrosia back to its roots. It's a fantastically cute game that can best be described as Pac-Man with puzzles. The goal here is to navigate an underwater maze while avoiding the bigger fish in the sea, nabbing treasure along the way. Your kids will love the art, and you'll be drawn in by the depth of the gameplay.



**Harry the Handsome Executive** was hired last September and

offers a wacky game that anyone working in a cubicle can enjoy. Get this—by wheeling himself around his office building in his chair, Harry has to accomplish various tasks and avoid the traumas of dart games, the mad careening of the mail boy, and exploding water coolers. It starts off slowly, and controlling Harry in his chair takes some getting used to, but the game grows on you. It even comes with a level editor for those of you who finish the game.



Ambrosia's most recent game is a solid accomplishment. **Mars Rising** is a well-crafted "scroller" that harks back to the wave of arcade hits in the '80s. Players pilot a ship flying above the surface of Mars while bombing tanks and gun turrets, shooting down mines and other aircraft, and working to liberate Mars. It's classic arcade fare and will really push your dexterity. Fortunately, it uses Apple's InputSprocket and works with a number of input devices and joysticks.





# power up

## ASK US

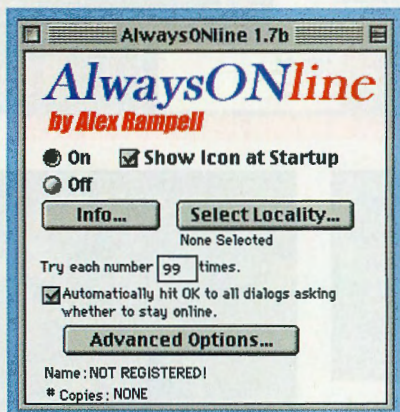
### We answer your technical questions, no matter how simple or complex.

**Q** How the hell do I deal with those damned "You've been logged on..." alerts on America Online? Don't they realize many downloads take more than 46 minutes to complete?

**A** If you're using AOL 3.0 or later, get yourself a copy of Alex Rampell's AlwaysOnline. This shareware control panel serves two extremely useful purposes. First, it permits you to dial an AOL access number up to 999 times in a row if the number is busy, instead of the default of five times. Second, when you're online, it can keep you there, by continually clicking OK in alert boxes that ask if you'd like to remain connected after AOL detects a period of inactivity. But if you use AlwaysOnline, do so prudently. Don't leave yourself connected 24



FIND  
STUFFIT  
EXPANDER  
on The Disc.



**DISPENSE WITH THOSE annoying AOL reminders that you've been idle too long with Alex Rampell's shareware gem AlwaysOnline.**

hours a day, hogging a modem line so that nobody else can get through to AOL.

**Q** I recently updated my Mac to OS 8.1 using the updater from the CD accompanying your issue, in which you mentioned that HFS+ is optional. The thing is, the installer didn't ask me if I wanted to install HFS+ or Extended Format or whatever you call it. So now I have no idea if my disk is formatted with HFS+ or not. How can I tell?

**A** Select your hard drive and choose Get

Info from the File menu. In the window that appears, check out the Format line. If the drive has been formatted with Mac OS Extended Format (also known as Hierarchical Filing System Plus, or HFS+), it'll say Mac OS Extended. I'd bet dollars to



**SIMPLY INSTALLING MAC OS 8.1 doesn't convert your disks to HFS+; you must select Mac OS Extended Format after choosing Erase Disk from the Finder's Special menu.**

doughnuts that it reads Mac OS Standard, because updating to Mac OS 8.1 does nothing to change the formatting of your drive; it simply installs new control panels and extensions. To convert a disk to Mac OS Extended Format, you must select the disk in the Finder, choose Erase Disk from the Special menu (be sure to back up first!), and in the dialog box that follows, choose Extended from the Format pop-up menu. Unless you do this, the formatting of your disk remains unchanged even after you install Mac OS 8.1.

**Q** A short while ago I inserted a floppy disk into the Mac IIcx at my school and was horrified to find out it was damaged. Is there any way to save the information on the disk without initializing it?

**A** Before I offer any advice, I must remind you that this is exactly the kind of situation that prompts columnists such as myself to implore people to always, always keep a current backup of any important data. You never know when something will go wrong, so your best insurance is a recent backup.

When a Mac refuses to read a floppy that was perfectly good the last time you used it, start by confirming that it isn't a onetime anomaly. Try shaking the disk a bit and reinserting it in the drive. If it's still unreadable, take it out and try a disk you know is good. If that, too, is unreadable, the problem is probably with the drive, not with your disk (not unlikely, given the age of the Mac and its environ-

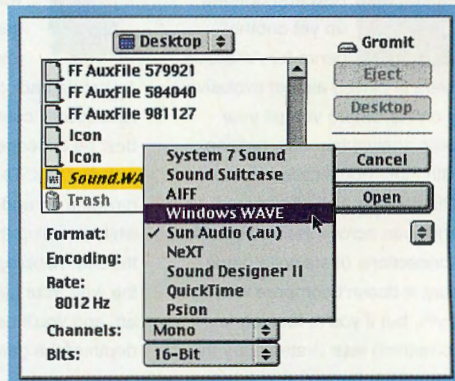
ment, where it probably sees a lot of use and abuse). In that case, clean the drive using a standard cleaning kit you can purchase at Radio Shack. If cleaning doesn't work, contact your local Mac service facility to repair or replace the drive.

If it seems to be just that one disk that's bad, try inserting it into another Mac floppy drive. Sometimes one drive will have difficulty with a particular disk but another accepts it just fine. If you can read the disk on another Mac, copy all the files to the hard drive and then copy them back onto a disk your standard Mac can read; toss the bad disk once you've confirmed that all the files have been salvaged.

If you're not able to read the disk in a clean drive or in another Mac, the disk is probably damaged in some way. Try using Symantec's Norton Utilities Disk Doctor or Apple's Disk First Aid to repair the floppy. If neither utility is successful, you're out of luck.

**Q** When I download WAV sound files from the Internet, is there any way to make them into alert sounds using SimpleSound or something like it?

**A** Search <http://www.shareware.com> for WAV and you'll locate plenty of Mac sound utilities that read WAV sounds and save them in any number of sound formats. I'm partial to Norman Franke's freeware SoundApp. Once you've converted your WAV file into a System 7 double-clickable sound file, drag and drop it onto the System



**SOUNDAPP IS FREWARE capable of converting and playing just about every sound format out there, including WAV files.**



file (not the System folder) to make it available as an alert sound.

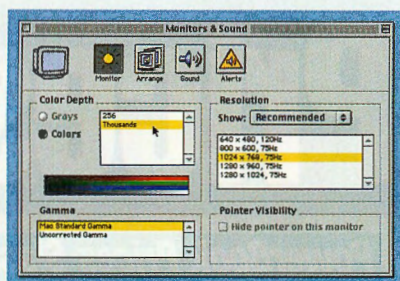
**Q** Is it possible to download Mac software on a Windows clone and then transfer the programs to a Mac? I'm forced to use this glorified calculator to surf the Internet at work because my Mac at home doesn't have a modem.

**A** I pity the poor fool who must work with Windows, but that doesn't mean you can't get your Mac goodies during your lunch hour. When you locate a Mac file you want to download, tell your Windows browser where to save the file, and give it a name that follows the DOS convention of eight characters, a period, then a three-character suffix. Most Mac files online are compressed using BinHex or Stuffit, so the appropriate suffix is either .hqx or .sit (and sometimes .sea for self-extracting archives).

When the download is complete, copy the file to a PC floppy, then insert the disk into your Mac. Make sure you have PC Exchange (part of the Mac OS) installed properly in your Control Panels folder so that the PC disk appears on the Mac's desktop. Using Aladdin Systems' freeware Stuffit Expander (<http://www.aladdinsys.com/consumer/expander1.html>), decompress the file, saving it to your Mac's hard drive. When you're finished, you can use the file just as you would any other Mac file.

**Q** Is there any way to tell how much VRAM (video memory) is installed in a Mac without opening the case and physically inspecting the memory slots?

**A** I don't know of any software that interrogates a Mac and reveals the amount of VRAM contained therein. If such a thing exists, I count on my readers to let me know. In the meantime, you should be able to determine the amount of VRAM by consulting the documentation that came with your Mac or video card. In the Technical Information booklet that accompanied my Power Mac 7600, for example, a table called "Colors or Grays Supported" shows the color depth available on different-size monitors at various resolutions. Using the Monitors & Sound control panel, I determine that my 17-inch monitor can display only thousands of colors when I set the resolution to 1,024 by 768. According to the Technical Information booklet, I should be able to see millions of colors with 4MB of VRAM, so I can deduce that my 7600 has only 2MB of VRAM installed.



**USING THE SETTINGS** available in the Monitors & Sound control panel, you can figure out how much VRAM your Mac has without opening it up.

The only reason to increase the VRAM in most Macs is to increase the number of colors you can display. If your Mac already displays millions of colors at the highest resolution your monitor affords, or you're satisfied with 256 or thousands of colors, there's no need to spend money on VRAM.

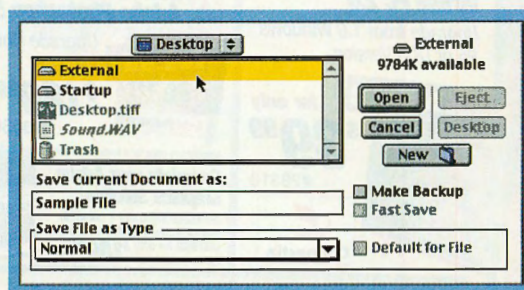
**Q** I have installed Mac OS 8.0 on several Power Macs. On a couple of the machines, when the desktop appears, I get the following error: "Desktop printer unknown error '-192' at '18.'" I click OK and can print without any trouble. I trashed all printer preference files and extensions and then reinstalled everything, but still the error appears.

**A** According to Apple, this error message is caused by a corrupted print job. To correct the problem, turn off Desktop Printer Spooler and Desktop PrintMonitor using the Extensions Manager control panel or a corresponding third-party utility. Choose Restart from the Finder's Special menu. When the Finder reappears, PrintMonitor should display a different error message indicating a damaged print job. Delete the damaged print job, enable Desktop Printer Spooler and Desktop PrintMonitor, then restart. The error messages should be gone for now. For other Desktop Printing issues, check out Apple's Tech Info Library article number 24306, "Mac OS 8: Desktop Printing Troubleshooting" (<http://ti1.info.apple.com/techinfo.nsf/artnum/n24306>), which provides a complete list of troubleshooting steps for Desktop Printing issues.

**Q** I have a Mac with two hard drives: one is a large external drive, the other a small start-up volume. When I save a file to the desktop, what determines where these files are actually saved? I'd like to save them on the larger drive and have them appear on the desktop, but I can't seem to figure out how to do this.

**A** Before I answer your question, let me back up a bit and explain the concept of the desktop. When you turn on a Mac, all the extensions and control panels load, and the Finder appears. The background of the Finder is called the desktop (this is not the same thing that gets rebuilt if you hold down command-option during start-up; that's the *Desktop file*, which keeps track of everything on your hard disk). The desktop is where your hard drive icons appear, along with other items such as the Trash. The background may also be decorated with a pattern (or a picture, if you're using Mac OS 8's Desktop Pictures control panel).

If you drag a file from a folder on your hard disk and drop it on the desktop, the file's icon appears on the desktop, but the Finder keeps track of it inside an invisible Desktop Folder at the root level of that hard disk. Each disk has its own invisible Desktop Folder, but all the items therein appear together on the Finder's desktop, so it's easy to get confused trying to figure out where the files are really stored. (Tip: While using File Sharing, you can access items on the remote Mac's desktop by opening the appropriate Desktop Folder,



**TO SWITCH DESKTOPS** in the Save dialog box, simply click the desired drive, which will be indicated in the upper right, which is visible under this circumstance.)

Getting back to your question. If you press command-D in a Save dialog box, by default the file is saved to the desktop of your start-up drive (its name and the amount of free space are shown in the upper right of the dialog box). However, it is possible to specify the desktop of another drive. In the Save dialog box, press command-D and then select the drive you prefer with a single click. You should see that the drive selected in the upper right has changed from the start-up volume to the selected volume. If you save now, the file will be saved on the desktop of that drive.

Owen W. Linzmayer ([askus@macaddict.com](mailto:askus@macaddict.com); <http://www.netcom.com/~owenink>) is a San Francisco-based freelance writer and the author of *The Mac Bathroom Reader*. Please submit technical questions or helpful tips directly via email or c/o MacAddict, 150 North Hill Drive, Suite 40, Brisbane, CA 94005.



# Lowest Prices Plus...

## GREAT MACMALL SOFTWARE DEALS!



### Mac® OS 8.1

Just \$49<sup>99</sup>!

When you purchase any version of the NEW Microsoft Office 98 Macintosh Edition! #27064

Price reflects \$30 mail-in upgrade rebate for owners of Mac OS 7.6. Price before rebate is \$79<sup>99</sup>. Promotional packing includes OS 8.0 plus 8.1 upgrade CD.

### RealPC and Stuffit Deluxe 4.5

Both for only \$99<sup>99</sup>

#25995

Save \$59!



### Macromedia Director 6.5 CD Power Mac

Updater from Version 6.0

only \$179<sup>99</sup>

#31229

### Virtual PC 2.0

Upgrade from 1.0 Windows 95 or DOS Version

NEW!

for only \$39<sup>99</sup>

#28310



### Now Available! Adobe Photoshop 5.0

Upgrade Now for only \$189<sup>99</sup>

#30885

Introductory price for a limited time only!

Complete your Adobe Graphics Solution!

Get Adobe Illustrator 7 (#94829) and/or Adobe PageMaker 6.5 (#67862) for only \$189<sup>99</sup> each

Call for details!



### Macromedia FreeHand 8!

Now with Transparency effects, animation Xtras, Freeform and path reshape tools!

NEW! \$139<sup>99</sup>!

Upgrade CD PowerMac®



### Norton Utilities 3.5

\$48<sup>99</sup>! Upgrade CD

#15159



The Worldwide Standard for Mac Utilities! SYMANTEC

#28828 Norton Utilities 3.5 Full Version w/Microsoft Office 98 purchase \$48<sup>99</sup>

### Microsoft Office 98 Mac Version Upgrade

Microsoft

\$258<sup>99</sup>

#26155

Call regarding special offers with purchase!



## PowerBook Prices Slashed up to \$1000!

### PowerBook 1400 Series Available from MacMall

#30682 PowerBook 1400cs/166MHz 603e/16MB RAM/1.3GB Hard Drive 12X CD/11.3" Dual Scan display

\$1,449

Price reflects MacMall Instant Rebate

## PowerBook® G3 Series!

PowerBook G3/233MHz/32MB RAM/2GB Hard Drive 20X CD-ROM/Ethernet/12.1" STN Passive-Matrix

Starting at

\$2,299!

#31474



NEW!

Up to 292MHz

### Also Available from MacMall

#31473 NEW! PowerBook G3/233MHz/32MB RAM/2GB Hard Drive/20X CD-ROM/Ethernet/FDD/56K Modem/12.1" STN passive-matrix \$2,579

#31472 NEW! PowerBook G3/233MHz/32MB RAM/2GB Hard Drive 20X CD-ROM/FDD/Ethernet/73.3" TFT active-matrix \$2,999

#31471 NEW! PowerBook G3/233MHz/32MB RAM/2GB Hard Drive 20X CD-ROM/FDD/Ethernet/14.1" TFT active-matrix \$3,499

#31470 NEW! PowerBook G3/250MHz/32MB RAM/4GB Hard Drive/ 20X CD-ROM/FDD/Ethernet/56K Modem/73.3" TFT active-matrix \$3,899

#31469 NEW! PowerBook G3/292MHz/64MB RAM/8GB Hard Drive/20X CD-ROM/FDD/Ethernet/56K Modem/14.1" TFT active-matrix \$5,999



## \$700 Price Drop on Power Macintosh 6500!

275MHz



Power Macintosh 6500/275MHz 603e/48MB RAM/6GB HD

24X CD/56K Modem/Zip Drive

MS Office 4.2.1

was \$2,099

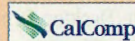
now \$1,399!

#30676

\$700 Price Drop!

Monitor sold separately.

### Drawing Slate II 6"x 9" with Cordless Stylus



for only \$99<sup>99</sup>

#68230

Special Purchase!



While supplies last!

### CoolPix 600

> 1024 x 768

> 8MB CompactFlash

\$569<sup>99</sup>

#31120

### CoolPix 900

> 1280 x 960; 8MB CompactFlash

> 3x optical Nikkor zoom lens

\$849<sup>99</sup>

#31119



### CD-R Media



50¢ per disc

After \$30 mail-in rebate for 10-pk. Price before rebate is \$39<sup>99</sup>.

Ask for #30157

### 12X External CD-ROM Drive

While supplies last!

> SCSI Interface

> Durable external case

> 1800Kb/sec transfer rate



\$109<sup>99</sup>

#23968

## Upgrades for your PowerBook G3

VIKING COMPONENTS Don't Forget Memory!

#31437 16MB PowerBook G3 Series \$79

#31438 32MB PowerBook G3 Series \$119

#31440 64MB PowerBook G3 Series \$245

#31442 128MB PowerBook G3 Series \$499



### 2.2GB Ultra SCSI 3

> 8ms seek time

> 7200 rpm, 512 cache

includes FWB toolkit PE

formatted for Mac®

> 3 Year Warranty

External \$279<sup>99</sup>

#27471

Internal \$229<sup>99</sup>

#27477

Blowout

lomega® Jaz® 1GB SCSI Drive!

> 10ms seek time

> 5400 rpm

> External SCSI

\$299<sup>99</sup>

#74475

Stock up on 16B cartridges #74545

1-2 124° 3-5 99° 6+ 89°

1-2 124° 3-5 99° 6+ 89°

1-2 124° 3-5 99° 6+ 89°

1-2 124° 3-5 99° 6+ 89°

1-2 124° 3-5 99° 6+ 89°

1-2 124° 3-5 99° 6+ 89°

1-2 124° 3-5 99° 6+ 89°

1-2 124° 3-5 99° 6+ 89°

1-2 124° 3-5 99° 6+ 89°

1-2 124° 3-5 99° 6+ 89°

1-2 124° 3-5 99° 6+ 89°

1-2 124° 3-5 99° 6+ 89°

1-2 124° 3-5 99° 6+ 89°

1-2 124° 3-5 99° 6+ 89°

1-2 124° 3-5 99° 6+ 89°

We ship **FedEx** Federal Express

✓ \$1.8 Billion in Available Inventory

✓ Over 45,000 Brand-Name Products

✓ Custom Configuration

✓ Fastest Overnight Delivery

We do our best to be accurate but occasionally mistakes occur. We are not responsible for any typographical, photographic or technical errors. Products and packaging may differ from stock available at time of shipment; we reserve the right to substitute equivalent items.



# Rebate Savings!



## MacMall Exclusive INSTANT REBATES!

### \$50 OFF!

ANY CPU Priced Between \$1,000 AND \$2,000

### \$100 OFF!

ANY CPU Priced Between \$2,001 AND \$3,000

### \$200 OFF!

ANY CPU Priced at \$3,001 or above

### No Mail-In Hassles! No Quantity Limits!

Call your Account Manager for details!



### Power Mac® G3!

Up to 300MHz

**FREE**  
32MB RAM or Virtual PC  
direct from Apple  
w/G3 purchase.  
See p. 9 for details.



**Power Mac® G3! Now \$1,699!**

233MHz PowerPC™ G3/32MB RAM  
4GB Hard Drive/24X CD-ROM (monitor sold separately) #30678 (desktop)  
Model shown is #30680

Also Available from MacMall

#30683	Power Macintosh G3/233MHz/32MB RAM/4GB Hard Drive 24X CD-ROM/ 56K modem /Mini Tower	\$1,999
#30679	Power Macintosh G3/266MHz/32MB RAM/4GB Hard Drive 24X CD-ROM/Zip Drive/Desktop model	\$1,999
#30680	Power Macintosh G3/266MHz/32MB RAM/6GB Hard Drive 24X CD-ROM/ Zip Drive/Video In & Out/Mini-Tower	\$2,499
#30686	<b>NEW!</b> Power Macintosh G3/300MHz/64MB RAM/4GB Hard Drive 24X CD-ROM/6MB SGRAM/Mini-Tower	\$3,359
#30684	Power Macintosh G3/266MHz/128MB RAM/4GB Hard Drive 24X CD-ROM/100Base-T/Mini-Tower	\$3,799
#30685	<b>NEW!</b> Power Macintosh G3/300MHz/128MB RAM Two-4GB Hard Drive/24X CD-ROM/100Base-T/Mini-Tower	\$4,899

### SuperMac C500/200MHz

PowerPC™ 603e 16MB RAM  
2.1GB Hard Drive/8X CD-ROM



**only \$995!** #30699

**FREE!**  
Astra 610s Scanner  
w/any C500 purchase.  
Call for details.

Also Available from MacMall

#30690	UMAX SuperMac C600 vPC/240MHz 603e/32MB RAM/3.0GB Hard Drive 24X CD-ROM Includes Instinct's Virtual PC	Was \$1,295 <b>Now \$1,195</b>
#30691	UMAX SuperMac J700 233MHz 604e/24MB RAM/2 GB HD/24X CD-ROM 33.6Kbps modem/Mac OS 8	Was \$1,795 <b>Now \$1,595</b>

Monitors sold separately. \*Virtual PC shipped in promotional packaging.

### Order any item from this ad and get Descent with Mac Attack absolutely **FREE!**



This free offer applies only to legitimate, paid-in-full purchases from this ad and is not applicable to any other purchase. Good only in the U.S.; not valid with any other offer and good only while supplies last. Limit one per order. Void where prohibited. You pay only \$2.99 for shipping and handling. Product shipped in promotional packaging. Ask for #31155

**APC Back-UPS™ Office**  
Ideal for the small office  
and home office



for only  
**\$78.99**  
#87981

While  
supplies  
last!

**Astra 600S Scanner**

- ▶ 30-bit color
- ▶ Scans up to 8.5" x 14"
- ▶ 300 x 600dpi; 4800dpi max.
- ▶ SCSI-2 interface

for only  
**\$99.99**  
#31003

Price reflects \$20 mfr. mail-in rebate.

**Exclusive!**

**UMAX®**  
The Magic of Color™



**Take Advantage of this  
Special Offer: Mac OS 8  
and a Teleport 56K Modem**

Both for only  
**\$178.99**  
#15027



**56K External  
Fax Modem**



for only  
**\$69.99**  
#95195

Price reflects \$20 mfr. mail-in rebate.

**Stylus 800 Printer**

- ▶ Up to 1440 x 720dpi
- ▶ 8ppm black;  
7ppm color
- ▶ Mac & PC  
compatible

**\$299.99**  
#90225

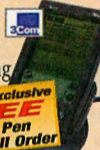


**NEW! Palm III™**

- ▶ 2MB Memory
- ▶ Infrared beaming

for only  
**\$399.99**  
#29986

**MacMall Exclusive  
FREE  
Cross Pen  
w/Palm III Order**



**Maxpower G3 Upgrade!**

- ▶ 240MHz
- ▶ 1MB Backside  
cache @160MHz
- ▶ For 7100/8100 Series

for only  
**\$799.99**  
#27220



**100ES Color  
Display**

- ▶ 15" color display
- ▶ 14" Viewable image
- ▶ 1280 X 1024 max. res.
- ▶ .25mm dot pitch

**\$229.99**  
#29929



**Connectix  
Quickcam  
(Grayscale)**



**Now Only  
\$29.99**  
#31103

Factory Refurbished. Limited quantities.

Order Any Time!  
Open 24 Hours. **1-800-965-3282**

Order Today by 10 pm EST—Get It Tomorrow by 10:30 am.  
Check out our Web site [www.macmall.com](http://www.macmall.com)

**Priority Source  
Code: #ZMAD871**

**MacMall**  
The Mail With It All...For Less!



# ClubMac® GREAT DEALS!

ON ALL YOUR STORAGE NEEDS



**ULTRASTAR ES**  
**2.1GB**

**Quantum**

**VIKING**  
**4.5GB**

8 MS Access  
7200 RPM  
Bare

512K CACHE  
5400 RPM  
Bare

**Quantum**  
**STRATUS SE**  
**2.1GB \$209**  
5400 RPM Bare

**Seagate**  
**BARRACUDA**  
Fast & Wide  
**18.2GB \$1489**  
7200 RPM Bare

**Quantum**  
**STRATUS SE**  
**8.4GB \$479**  
512K Buffer Bare

**Quantum**  
**ATLAS III**  
**18.2GB \$1379**  
7200 RPM Bare

**LIMITED QUANTITIES!**  
**CALL NOW!**

**ONLY**  
**\$175**

**OUTSTANDING DEAL!**  
**HARD DRIVES**

## Quantum

Quantum Stratus drives carry a 3 Year Warranty  
Quantum Atlas & Viking drives carry a 5 Year Warranty

Description	Model	Access	RPM	Bare	Int	Ext
Ultra SCSI-3						
2.1GB Stratus SE	QM32160SES	10ms	5400	'209	'219	'269
3.2GB Stratus SE	QM33240SES	10ms	5400	'239	'259	'309
4.3GB Stratus SE	QM34320SES	10ms	5400	'279	'299	'349
4.5GB Viking	QM34550VKS	8ms	7200	'309	'329	'379
6.4GB Stratus SE	QM36480SES	10ms	5400	'359	'379	'429
8.4GB Stratus SE	QM38420SES	10ms	5400	'479	'499	'549
9.1GB Atlas III	QM309100TDS	7.8ms	7200	'869	'889	'939
18.2GB Atlas III	QM318200TDS	7.8ms	7200	'1379	'1399	'1449
UltraWide SCSI-3						
4.5GB Viking II	QM304550PSXW	7.5ms	7200	'449	'479	'559
9.1GB Atlas III	QM309100TDLW	7.8ms	7200	'869	'899	'979
18.2GB Atlas III	QM318200TDLW	7.8ms	7200	'1389	'1419	'1499

**IDE Drives**

Description	Model	Access	RPM	Bare	Int	Ext
2.1GB Stratus SE	QM32160SEA	10ms	5400	'139	'149	----
3.2GB Stratus SE	QM33240SEA	10ms	5400	'159	'169	----
4.3GB Stratus SE	QM34320SEA	10ms	5400	'189	'199	----
6.4GB Stratus SE	QM36480SEA	10ms	5400	'269	'279	----
8.4GB Stratus SE	QM38420SEA	10ms	5400	'339	'349	----

## Seagate

Seagate drives carry a 5 Year Warranty

Description	Model	Access	RPM	Bare	Int	Ext
Ultra SCSI-3						
9.1GB Barracuda 9LP	ST39173N	7.1ms	7200	'849	'869	'919
9.1GB Cheetah	ST19101N	7.7ms	10000	'929	'949	'999
18.2GB Barracuda 18	ST118273N	7.1ms	7200	'1479	'1499	'1549
UltraWide SCSI-3						
9.1GB Barracuda 9LP	ST39173W	7.1ms	7200	'859	'889	'969
9.1GB Cheetah 9LP	ST39102LW	12.2ms	10000	'1069	'1099	'1179
18.2GB Barracuda 18	ST118273W	7.1ms	7200	'1489	'1519	'1599
18.2GB Cheetah 18	ST118202LW	12.2ms	10000	'1849	'1879	'1959

**Fast SCSI-2**

Description	Model	Access	RPM	Bare	Int	Ext
23GB Elite 23	ST423451N	8ms	5400	'1579	'1599	'1679

**Fast&Wide SCSI-2**

Description	Model	Access	RPM	Bare	Int	Ext
23GB Elite 23	ST423451W	8ms	5400	'1619	'1649	'1749

IBM 2.1GB drive carries a 3 Year Warranty  
IBM 18XP drive carries a 5 Year Warranty

Description	Model	Access	RPM	Bare	Int	Ext
2.1GB UltraStar ES	09J1034	8.5ms	5400	'175	'185	'235
9.1GB UltraStar 9ES	00K3970	7.5ms	7200	'679	'699	'749
18.2GB UltraStar 18XP	59H6589	6.5ms	7200	'1629	'1649	'1699

**THE CLUBMAC PACKAGE**  
ClubMac drives are preformatted and thoroughly tested. ClubMac drives include a 30-Day Money Back Guarantee, Charismac Anubis Formatting Utility software, user's guide, brackets (wide drives include internal ribbon cable), 25/50-pin SCSI cable and power cord for external drives (wide drives include 68/68 pin SCSI cable).

## TAPE BACK-UP

### ClubMac DDS-3 DAT Drive

**12-24GB**  
**\$1079**

**CLUBMAC TAPE BACK-UP**  
4-8GB DDS-2 DAT Drive w/ Retrospect .....\$749  
12-24GB DDS-3 DAT Drive w/ Retrospect.....\$1079  
15-30GB DLT Drive w/ Retrospect.....\$2599  
20-40GB DLT Drive w/ Retrospect.....\$2899  
35-70GB DLT Drive w/ Retrospect.....\$6399

### ClubMac 8mm AIT Drive

**25-50GB**  
**Up to 6MB/Sec!**  
**ONLY \$2999**

**CLUBMAC AIT DRIVE**  
25-50GB 8mm AIT Drive .....\$2999  
25-50GB 8mm AIT w/ Fast & Wide Card .....\$3179

**BONUS OFFER!!!**  
All ClubMac Tape Back-up Products are bundled with Retrospect 4.0

**RETROSPECT 4.0**  
Retrospect 4.0 Retail Single User.....\$149  
Retrospect 4.0 Remote 10 User License.....\$175  
Retrospect Network Kit 4.0 (w/10 User License).....\$275

## REMOVABLE

**\$299**

**REMOVABLE DRIVES**  
ClubMac SyQuest 200MB 5.25" .....\$349  
SyQuest EZ Flyer 230MB 3.5" .....\$149  
SyQuest SyJet 1.5GB 3.5" .....\$299

## SYQUEST MEDIA

Media	Qty 1	Qty 10	Qty 20
44MB	\$38ea	\$37 <sup>90</sup> ea	\$37ea
88MB	\$38ea	\$37 <sup>90</sup> ea	\$37ea
200MB	\$59ea	\$58ea	\$57ea
270MB	\$43ea	\$42ea	\$41ea
EZ230MB	\$27ea	\$26 <sup>90</sup> ea	\$26ea
1.5GB SyJet	\$79ea	CALL	CALL

## CD READERS & RECORDABLES

### BLAZING FAST!

**32X CD-ROM**

**ONLY \$149**  
5400KB/sec data transfer  
90ms avg access time  
Caddy-less design

**CLUBMAC CD-ROM READERS**  
32X 90ms 5400K/sec.....\$149  
16X 5 Disc CD Changer.....\$279

**THE CLUBMAC PACKAGE:** ClubMac CD-ROM & CD Recorders are thoroughly tested. CD-ROM & CD Recorders include a 30-Day Money Back Guarantee, Charismac CD AutoCache utility software, user's guide, 25/50-pin SCSI cable, terminator, and power cord.

### ClubMac \$459!!

**4X/12X CD Recorder**

**Bundled With Toast 3.5**

**CLUBMAC CD-RECORDERS**  
4X/12X CD-R w/Toast Pro 3.5.....\$459  
**CLUBMAC CD-REWRITABLE**  
2X/2X/6X CDRW w/Toast Pro 3.5.....\$459  
4X/2X/6X CDRW w/Toast Pro 3.5.....\$579

## Zip Drive Solutions

**ZIP REFURB**  
**\$89.95**  
**100MB**

**NEW! ZipPLUS**  
**\$179.95**

**IOMEGA ZIP DRIVES**  
ZipPlus™ Drive w/one cartridge.....\$179<sup>95</sup>  
Zip Drive w/one cartridge.....\$119<sup>95</sup>  
Zip Bundle-drive, 11 Disks, Case, 2 Caddy's.....\$259\*  
Zip Drive Internal- all PowerMacs.....\$119  
Zip Drive Internal- all PowerComp/Umax.....\$99  
\*Price after \$20 mail-in rebate. Rebate valid thru 8/15/98.

## Jaz Drive Solutions

**Includes One FREE Cartridge**

**ONLY \$299.95**  
**1.0GB**

**IOMEGA JAZ DRIVES**  
Jaz 1GB Drive w/one cartridge.....\$299<sup>95</sup>  
ClubMac Jaz 1GB Drive w/3 cartridges.....\$459  
Jaz 1GB Drive Internal- all PowerMacs.....\$279  
Jaz 1GB Drive Internal- Power/Umax.....\$259  
Jaz 2GB Drive w/one cartridge.....\$499<sup>95</sup>

## IOMEGA MEDIA

**ZIP Media**  
as low as **\$12.95**

**JAZ Media**  
as low as **\$84.95**  
For JAZ media

Format	Part#	Qty 1-2	Qty 3-6	Qty 7-9	Qty 10+
ZIP 100MB	1040 1006	\$19 <sup>95</sup>	\$16 <sup>95</sup>	\$14 <sup>95</sup>	\$12 <sup>95</sup>
Format	Part#	Size	Qty 1-2	Qty 3-5	Qty 6+
JAZ 1GB	1040 1015	1.0 GB	\$99 <sup>95</sup>	\$89 <sup>95</sup>	\$84 <sup>95</sup>
JAZ 2GB	1040 1074	2.0 GB	\$124 <sup>95</sup>	CALL	CALL

**CALL 1-800-217-9208**  
**FOR A FREE CATALOG**

WARRANTIES: All items manufactured by ClubMac are returned to ClubMac for warranty repair. All other items carry manufacturer's warranty. MONEY BACK GUARANTEE: All products manufactured by ClubMac carry a 30 day money back guarantee. ClubMac extends all other manufacturer's return policies to its customers. Non-ClubMac products carry 30 day money back guarantee when specified. RETURNS: Call for RMA number. Any product that is returned WITHOUT an RMA number will be refused. ALL PRODUCT INFORMATION AND PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE. NOT RESPONSIBLE FOR TYPOGRAPHICAL ERRORS.



# PowerMac G3

**ONLY \$3197 300MHz**

**FREE† 32MB DIMM or VIRTUAL PC W/WIN 95**

**A \$299 FREE VALUE!** HomePage 3.0 & Object Dancer with Any Apple CPU Purchase. Ask for Item #PPP 1016. Call for details.

- 300MHz G3
- 64MB RAM
- 24X CD ROM
- 4GB F/W HD
- 6MB SGRAM

Offer only available with purchase of G3 Minitor or Desktop. Fulfilled through Apple Computer with Mail-In Coupon. Offer expires 6/26/98.

PowerMac G3 300MHz MiniTower	\$3197
34MB RAM, 1MB BS-Cache, 4GB HD, 24X CD, 10BT, 6MB SGRAM	
PowerMac G3 300MHz MiniTower	\$4595
128MB, 1MB BS-Cache, (2) 4GB HDs, 24X CD, 100BT, 6MB SGRAM, iXmicro 8MB 2D/3D	

**starting at \$2219**

**Macintosh G3 Powerbook**

**Now Shipping**

- Available with a 12.1", 13.3", or 14.1" Display
- 233MHz-292MHz G3
- 2GB-8GB HD IDE
- 20X CD ROM

**A \$299 FREE VALUE!** HomePage 3.0 & Object Dancer with Any Apple CPU Purchase. Ask for Item #PPP 1016. Call for details.

Authorized Catalog Reseller

# UMAX® SuperMac C500It

**240MHz 603e • 1MB VRAM • 32MB RAM • 2.1GB EIDE HD • 24X CD ROM**

**Monitor Included!**

**Optiquest Q41 14" Display (13.1 Viewable)**

**\$895 without Monitor**

**\$995**

Umax SuperMac C600 vPC	\$1195
240MHz 603e, 32MB RAM, 2.1GBHD, 24X, w/ VPC-DOS	
Umax SuperMac C500e	\$1095
240MHz 603e, 24MB RAM, 3GB HD, 24X, Ethernet	

**PowerMac G3 DESKTOP**

**ONLY! \$1595**

**FREE† 32MB DIMM or VIRTUAL PC W/WIN 95**

**A \$299 FREE VALUE!** HomePage 3.0 & Object Dancer with Any Apple CPU Purchase. Ask for Item #PPP 1016. Call for details.

**PowerMac G3 266MHz G3 Desktop** \$1895

32MB RAM, 4GB HD, 24X CD, Zip Drive

Offer only available with purchase of G3 Minitor or Desktop. Fulfilled through Apple Computer with Mail-In Coupon. Offer expires 6/26/98.

**MONITOR**

**SONY 20SF2 20" Monitor**

**Special Price \$929!**

• 19.1" Viewable Area • 30mm

**SONY**

Multiscan 100ES 15", 1280x1024, 25mm	\$299
Multiscan 100GS 15", 1280x1024, on screen disp	\$339
Multiscan 200ES 17", 1280x1024, 25mm	\$549
Multiscan 200GS 17", 1280x1024, on screen disp	\$629
Multiscan 20SF2 20", 1280x1024	\$929
Multiscan 400PS 19", 1600x1200	\$999
Multiscan 500PS 21", 1600x1200	\$1399

**APPLE**

Multiple Scan 15AV 15", 1024x768	\$379
Apple ColorSync 17"	\$789
Apple ColorSync 20"	\$1759
AppleVision 750 17", 1280x1024	\$689
AppleVision 850 20", 1600x1200	\$1649

**RASTEROPS**

MC6215 17", 15.9 viewable 1024x768	\$499
MC7515 19", 1600x1200	\$899
SuperScan MC801HR 21", 1600x1280	\$1349

**NEC**

A500 15", 1024x768, 28 dot pitch	\$285
M500 15", 1024x768, 28 dot pitch	\$369
M700 17", 1024x768, 28 dot pitch	\$687
E1100 21", 1280x1024, 28 dot pitch	\$1199
P1150 21", 1360x1024, 28 dot pitch	\$1349

**VIEWSONIC**

EA 771 17", 11280x1024, 25 dot pitch	\$509
17GA w/Speakers 1152x870, 86Hz, 27 dot pitch	\$559
GT775 17", 1280x1024, 80Hz, 25 dot pitch	\$629
G790, 19" 1600x1200, 25 dot pitch	\$929
PT 813, 21" 1600x1200, 85Hz, 28 dot pitch	\$1429
P 815, 21" 1800x1440, 78Hz, 25 dot pitch	\$1489

**GRAPHIC CARDS**

**Nexus GA™ 8MB**

**ONLY \$519**

**ATI**

Nexus GA™ 8MB 2D & 3D Pro PCI	\$519.00
XClaim VR™ 4MB PCI graphics card	\$244.25
XClaim TV™ Tuner	\$82.00

**IXIMICRO**

Mac Rocket 2D/3D w/Video Out	\$209
Pro Rez 2D/3D 128 bit 8MB PCI	\$299
Twin Turbo 128MB 4MB PCI	\$269
Twin Turbo 128MB 8MB PCI	\$429
Ultimate Rez 2D/3D 8MB PCI	\$559
Turbo TV	\$99

**TECHWORKS**

Power 3D (PCI)	\$199
----------------	-------

**MODEMS**

**U-Robotics 56K V.90 Data Fax/Modem**

**ONLY \$179.95**

**U.S. ROBOTICS MODEMS**

56k Sportster FAX/Modem w/X2	\$159.95
------------------------------	----------

**GLOBAL VILLAGE MODEMS**

Teleport 56K Fax/modem w/ K56 Flex	\$149.99
Teleport 56K Fax/modem w/X2 technology	\$149.99
Teleport 56K w/X2 technology w/OS.1	\$159.99
Teleport V.90 56K Fax/Modem	\$159.99
56K PCMCIA Combo Card	\$299.00

**LOGICORE MODEMS**

33.6K External MAC Modem	\$47.95
--------------------------	---------

**E-TECH MODEMS**

56K Bullet External Fax/Modem	\$119.95
-------------------------------	----------

**GOLD 56K**

Gold 56K External Fax/Modem	\$99.00
-----------------------------	---------

**MEGAHERTZ MODEMS**

Cruise Card, XJAE 33.6 for PowerBooks	\$299.00
56K X-JackPCMCIA	\$224.99

**SOFTWARE**

**Photoshop 5.0 IN STOCK!**

**Upgrade \$179**

**APPLE**

System 8.1 CD	\$69.99*
---------------	----------

**ADOBE**

Illustrator 7.0 upgrade	\$119.95
Photoshop 5.0 upgrade	\$179.00
PageMaker 6.5 upgrade	\$89.95
Premiere 5.0 upgrade	\$179.00

**FILEMAKER INC.**

FileMaker Pro 4.0	\$181.95
-------------------	----------

**CLARIS HOMEPAGE 3.0**

Claris HomePage 3.0	\$95.95
---------------------	---------

**MACROMEDIA**

FreeHand 8 upgrade	\$149.00
FreeHand 8	\$379.00
Director 6.5 Multimedia Studio upgrade	\$499.00
Director 6.5 Multimedia Studio	\$925.00

**MICROSOFT**

Office 98 Standard	\$419.95*
Office 98 Standard Upgrade	\$263.95*

**BRODERBUND**

MYST	\$22.95
Journeymen 3	\$49.95
Riven	\$48.95

**SYMANTEC**

Norton Utilities 3.5 Upgrade	\$49.95
Norton Antivirus 5.0 Mac	\$69.95

\*After \$50 Mail-in Rebate from Apple. Must purchase Mac OS 8.1 with Microsoft Office 98 between 3/15/98 and 6/30/98. Valid on full product only. Certain restrictions apply.

**SCANNERS**

**VISIONEER PAPERPORT STROBE**

**SPECIAL \$179**

**VISIONEER**

PaperPortVx (Grayscale)	\$99.99
PaperPortVx (Grayscale) refurbished	\$49.99
PaperPort Strobe COLOR refurbished	\$119.99

**AGFA**

Agfa SnapScan 310 30 bit Scanner	\$199
Agfa Arous II Desktop Pro Scanner	\$1499

**UMAX**

UMAX Astra 610S	\$129*
UMAX Paperlook II w/trans. adapter	\$1195

**MICROTEK**

Microtek Scanmaker III w/trans. adapter	\$1189
Microtek Scanmaker V600, 30bit	\$149*
Microtek Scanmaker V310, 30bit	\$79*

\*After \$50 Mail-in Rebate Valler \$30 Mail-in Rebate. Both ends 6/30/98

**PRINTERS**

**AMAZING EPSON QUALITY! UNBELIEVABLE PRICES!**

**AS LOW AS \$249**

**EPSON**

Stylus Color 600 1440 DPI	\$249
Stylus Color 850 1440 DPI	\$379
Stylus Color Photo 700 6 COLOR	\$249
Stylus Color 3000 17x 22" 1440 DPI	\$1999

**HEWLETT PACKARD**

HP LaserJet 6MP	\$885
HP LaserJet 4000N	\$1496

**ACCELERATORS**

**MAXPower G3**

**PowerPC 750 Upgrade**

**250MHz FOR JUST \$749**

**NEWER TECHNOLOGY**

MAXPower G3 6100 240MHz/160 Cache	\$699
MAXPower G3 7100/8100 210MHz/105 Cache	\$599
MAXPower G3 7100/8100 240MHz/125 Cache	\$799
MAXPower G3 220/110 PPC 750 upgrade	\$649
MAXPower G3 250/125 PPC 750 upgrade	\$749
MAXPower G3 300/300 PPC 750 upgrade	\$2189

**NO SURCHARGE**

**ClubMac®**

**62078**

**ORDER TODAY! 24 HOURS A DAY 7 DAYS A WEEK**

**1-800-217-9208**

Order On-line @ <http://www.club-mac.com>



CALL MON-SAT 9AM-6PM PST AT 1-800-533-9005!



Check out our Web!

WWW.COMPU-AMERICA.COM

- Updated Daily
- Color Photos
- International Sales
- Online Ordering
- Complete Specs
- No Wait! No Hold!
- Stock/Availability
- Shipping Estimates
- Completely Accurate

10435 Santa Monica Blvd.  
Los Angeles  
CA 90025

Tel (310) 446-1771  
Fax (310) 475-7744  
email: compamer@artnet.net

## G3/266 MINITOWER



Features:

- 266mhz G3 Processor
- Minitower case
- 32 Meg RAM
- 6 Gig Hard Drive
- 24X CDROM
- Internal Zip Drive
- A/V In/Out

**\$2199**

## G3/233 DESKTOP

Features:

- 233mhz G3 Processor
- Desktop case
- 32 Meg RAM
- 4 Gig Hard Drive
- 24X CDROM
- 3 PCI Slots
- 2MB SGRAM



**\$1499**

## APPLE PRODUCTS

### NEW G3 POWERMACS!

G3/300MT	128/2-4GW/24X/6VR	CALL	7300/200	32/4GIG/CD	1099*
G3/300MT	64/4G/24XCD	2979	7300/180	16/2GIG/CD	999*
G3/266MT	128/4GW/24X/ZIP/6VR	3199	6500/300	32/4G/CD/33.6F/AVID	1379
G3/266MT	32/6G/24X/ZIP	2199	6500/250	32/4G/CD/HOM	999*
G3/266DT	32/4G/24X/ZIP	1699	6500/225	32/3G/CD	899*
G3/233MT	32/4G/24X/MODEM	1699	4400/200	16/2G/CD/KEY	899*
G3/233DT	32/4G/24XCD	1499	4400/200	32/GIG/CD/PENT	1199

### NEW G3 POWERBOOK!

9600/350	64/4G/24XCD/ZIP	2599	G3/250	32/5G/20X/56K	4099
9600/300	64/4G/24X/ZIP	2199	G3/250	32/5G/20XCD	3999
9600/200MP	32/4GIG/CD	1899/1799*	3400C/240	16/2G/CD/MOD	2499
9600/233	32/4GIG/CD	1899*	3400C/240	16/2G/CD	CALL
9600/200	32/4GIG/CD	1799*	3400C/200	16/2G/CD/MOD	CALL
9600/300	32/4G/24XCD/ZIP	1799	3400C/200	16/2GIG/CD	CALL
9600/250	32/4GIG/12XCD/ZIP	1599	2400C/200	16/2G/CD	1599
9600/200	32/2GIG/12XCD/ZIP	1599	1400C/166	16/2G/CD	1499
7300/PEN	32/2GIG/CD/PENTIUM	1499*	1400C/133	16/1G/CD	1399

### PERFORMAS

1499	1400CS/166	16/1G/CD	CALL
999*	5300C/100	16/1GIG	CALL
999*	5300CS/100	16/750/MOD	CALL
799*	5300CS/100	8/750	CALL

### WorkGroup Servers

CALL FOR NEW G3 SERVERS!

7350/180	48/4G/CD/SHA	CALL
7350/180	48/4G/CD/INT	CALL
7350/180	48/4G/CD	CALL
9650/233	64/4G/CD/SHA	CALL
9650/233	64/4G/CD/INTER	CALL
9650/233	64/4G/CD/DAT	CALL

The New G3 PowerBook.  
Get it before it's too late!



Up to 292mhz G3, 83mhz bus

## MONITORS AND VIDEO CARDS



Q51/Q53 15"	229/249	V95	489
15GA	289	OPTIQUEST Q100	899
E655/E641	249/179	VIEWSONIC VWPAN VPA138	1299
Q71	379		

**SONY**

EA771	399		
G771/G773	449/479	Sony 20SEII	1099
GT775 /G790	579/779	Sony W900	CALL
17PS/17EA	649/579	Sony 100ES/100GS	299/329
17GS/17GA	549/499	Sony 200ES/200GS	549/599
P775/PT775/PT771	549/599/599	Sony 200PS 17"	729
G810/P810	979/1099	Sony 400PS 19"	899
PT813/P815	1249/1249	Sony 300SF 20"	999
29GA	1699	Sony 500PS 21"	1279
V775/V773/V655	489/439/239		

**NEC**

NEC M500 15"  
NEC M700 17"  
NEC P750 17"

NEC E700  
NEC E1100  
NEC P1150

**RASTEROPS**

Superscan MC-620	549
Superscan MC-6315	499
Superscan MC-7515	829
Superscan MC-20"	1099
Superscan MC-801	1149
Superscan MC-801-HR	1249

**radius**

PressView 21SR	2699
PrecisionView 21	1599
Colormatch 1920	2299
PhotoDV PCI W/FIREWIRE	369
Thunder Power 30/1920	649
PRECISION COLOR 24/1600	479
VIDEO VISION STUDIO 2.0	2999
NEXUS GA 8 MEG	499
XCLAIM ULTRA VR 4 MEG	179
XCLAIM TV TUNER	89



**CALL MON-SAT 9AM-6PM PST AT 1-800-533-9005!**  
 Government, University and Fortune 1000 P.O.'s are welcome!  
 Business Leasing is Available! International Orders Please call (310) 446-1771

## 4400/200 PC COMPATIBLE



### Features:

- 200mhz 603e Processor
- Desktop Case
- 16 Meg RAM
- 2 Gig Hard Drive
- CDROM
- 166 mhz DOS Card

# \$1199



IX3D ULTIMATE REZ 8MB 499  
 IX3D PRO REZ 4 MB 279  
 IX3D MAC ROCKET 239



Twin Turbo 8 MEG 379  
 Twin Turbo 4 MEG 249  
 Twin Turbo 2 MEG 199  
 Twin Turbo TV CARD 79

## STORAGE AND ACCESSORIES



3400 Auto Adapter	69
Exp. Bay Power Adapter	139
3400 5 Hour Battery	129
1400 Zip Drive	329
3400/5300/190 Zip Drive	329
1400 Bundle Charger/Adapter/Battery	199
3400 Bundle Charger/Adapter/Battery	249

### PROCESSOR UPGRADES

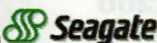
APPLE POWERMAC 132MHZ	99
APPLE POWERMAC 150 MHZ	149
APPLE POWERMAC 200MHZ	249
APPLE POWERMAC 233MHZ	349



ARTZ II 6 X 8 W/PAINTER	549
ARTZ II 6 X 8	269
ARTZ II 12 X 12	379
ARTZ II 12 X 18	649



FriendlyNet 8+2 Switch	279
FriendlyNet 8+2 Switch	349
FriendlyNet Switch	599
Fast 10/100PCI Card with NetDoubler	119
Fast 10/100PCI Card	79
NetDoubler 2 User Pack	86
NetDoubler 5 User Pack	169



Cheetah 4	549/649
Cheetah 9.1G SCSI/Wide	949/999
Barracuda2.2G SCSI/Wide	349/379
Barracuda4.5G SCSI/Wide	499/549
Barracuda9.1G SCSI/Wide	749/749
Elite 23G SCSI/Wide	1699/1799



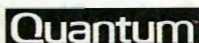
MaxPowr G3 250	749
MaxPowr G3 266	949
MaxPowr G3 275/183	1199
MaxPowr G3 275/275	CALL
Bookendz 500 series	115
Bookendz 500 series with Ethernet	139
Bookendz 5300 and 180 series	149
Bookendz 1400 series	149
Bookendz 3400 series	149
NuPowr 183mhz for 1400 series	399
NuPowr 183mhz for 500 series	429
MaxPowr Citation 200mhz	339
MaxPowr Citation 233mhz	429



Global Village Plat 56K EXT	149
Global Village Gold II PCM 14.4	49
Global Village Gold II 14.4EXT	49
Global Village 56.6 PCMCIA	249
Global Village 56.6 ETH/PCM	349



ZIP DRIVE 100 MB	139
ZIP DRIVE PLUS	189
JAZZ DRIVE 2 GIG	569
JAZZ DRIVE 1 GIG	279
ZIP CART 10 PACK	109
JAZZ CART	79
IOMEGA BUZ	189



AtlasII 2.2G SCSI/Wide	225/225
AtlasII 4.5G SCSI/Wide	479/499
AtlasII 9.1G SCSI/Wide	649/749
Stratus 3.2G/4.3G	225/279
Stratus 6.4G/8.4G	349/449
EXTERNAL CASE	79

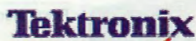
## PRINTERS AND IMAGING



5000N	CALL
4000N/4000NT	1349/1449
6MP	839
4MV	1999



GCC ELITE XL-608	1599
GCC ELITE XL-1212	1299
GCC ELITE XL-616	1899
GCC ELITE XL-808	2899
GCC ELITE XL-1208	2899
GCC ELITE XL-1208PLATE MAKER	3799



PHASER 350 COLOR LASER	2999
PHASER 380	CALL
PHASER 450	CALL
PHASER 480X	CALL
PHASER 560 COLOR LASER	CALL
LASER 600WIDE FORMAT	11999



SCANMAKER E6	279
SCANMAKER E6 PRO	529
SCANMAKER III	1229
SCANMAKER V300	129
COLOR PAGE WIZ	149



DIMAGE V	495
DIMAGE SCAN	CALL
QUICKSCAN 35	CALL



JADE	449
SAPHIR	1389
SAPHIR ULTRA	CALL
OPAL	CALL
OPAL ULTRA	CALL



STYLUS COLOR 850	349
STYLUS COLOR 700	CALL
STYLUS COLOR 600/800	229/289
STYLUS COLOR Photo	279
STYLUS PRO-XL	449*
STYLUS COLOR 1520/3000	729/1649
EXPRESSION/636/EXEC	739
EXPRESSION/636/ART	949
EXPRESSION/636/PRO	1299



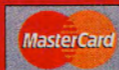
SNAPSCAN 310	179
SNAPSCAN 600	349
SNAPSCAN 600 ART LINE	449
ARCUS II SOLO	1299
ARCUS II W/FULL PHOTO	1499
EPHOTO 1280	84



VISTA Astra 610S-Photo Deluxe	149
VISTA Astra 1200-Photo Deluxe	249
VISTA Astra 1200-PRO	449
VISTA Astra POWERLOOKII/III	1249/CALL
VISTA Astra POWERLOOK 3000	CALL
Mirage IISE w/Trans	3699

We ship worldwide with: **FedEx**

We Accept:



All prices are cash discounted. Prices subject to change without notice. Not responsible for typos. And asterisk "\*" denotes a refurbished product





# Your Macintosh® Catalog SuperStore™

PROUDLY SERVING MAC USERS SINCE 1986

Outperforms Windows version!  
Microsoft Office 98  
Macintosh Edition

AS LOW AS  
**\$259.98**

- #59073 Office 98 Upgrade ..... \$259.98
- #59070 Office 98 Full Version ..... \$449.98
- GOLD versions also include FrontPage 1.0, Encarta 98 and Bookshelf 98
- #59072 Office 98 GOLD Upgrade .... \$359.98
- #59071 Office 98 GOLD Full Version . \$539.98

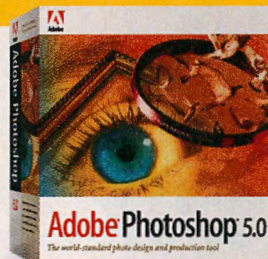


The world leader in image editing...with the NEW features you asked for!

**New! Adobe Photoshop 5.0 Upgrade**

**ONLY \$184.98**  
#77530

- Features multiple undo and editable text
- ICC/ColorSync Support – for consistent color from input to output



**FREE – A \$99.98 Value!**  
Extensis PhotoAnimator full or upgrade with purchase. While supplies last.

**FREE! Disk Drive TuneUp Special Edition w/Office 98 Purchase.**

## Iomega Removable Media Drives

Jaz 1GB  
**ONLY \$299.95**  
#25659



Zip 100MB Reconditioned  
**ONLY \$89.95**  
#55181



Jaz 1GB Drive	ONLY
#25658 Internal SCSI .....	\$279.95
#73839 External SCSI – Reconditioned .....	\$199.95
Jaz 1GB Cartridges	
Item# 1-2 3-5 6+	
#81235	\$99.95 \$89.95 \$84.95

#73832 Internal SCSI w/o cartridge .....	\$119.95
#70411 External SCSI .....	\$119.95*
<b>Zip 100MB Disk Mac Formatted</b>	<b>ONLY</b>
#91160 Zip Disk – 3-Pack .....	\$49.95
#32264 Zip Disk – 6-Pack with FREE Zip Caddy .....	\$89.95
#73829 Zip Disk – 10-Pack with FREE Z-Cube .....	\$129.95

\* After \$20 mfr. mail-in rebate. Low Zone price: \$139.95.

## Graphics Solutions from Macromedia

Director 6.5  
Multimedia Studio Upgrade



**NEW! ONLY \$498.98**  
#86007

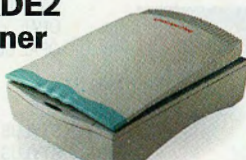


FreeHand 8 Upgrade  
**ONLY \$148.98**  
#77495

**2 FREE BONUSES!**  
Art Mania 10,000 royalty-free clipart! and 2 High-Quality CD-Rs with your purchase of FreeHand 8 (full, upgrade or comp. upgrade). Act now – supplies are limited!

## LinoColor JADE2 Flatbed Scanner

with Elite 5.0  
**ONLY \$399.98**  
#56914



## Olympus D-340L Digital Zoom Camera

**ONLY \$799.98**  
#00795



Own the upgrade card that won  
“Best of Show” at Macworld ‘98!

MAXpower G3 PowerPC Processor

AS LOW AS  
**\$499.98**

Description	G3 Speed	Cache	Cache Speed	Item #	ONLY
Power Mac 61xx & Work Group Server 61xx, Performa 61xx	210MHz	512k	105MHz	#60415	\$499.98
Power Mac 7100, PowerMac81xx	240MHz	1MB	120MHz	#60418	\$799.98

PLEASE CALL FOR ADDITIONAL G3 PROCESSOR UPGRADES AND SYSTEM COMPATIBILITIES!

Rated #1 by the people who own them!

**SUPERmac' C500LT/200**

- 200MHz PowerPC™ 603e processor
- 256K Level 2 cache
- 16MB RAM
- 2.0GB EIDE hard drive
- 1MB VRAM
- 2 PCI expansion slots
- Two high-speed serial ports
- 8X CD-ROM drive



**ONLY \$899.98**  
#74738

Monitor sold separately.

**SAVE OVER \$350!**

**QuarkXPress 4.0**  
with QuarkImmedia

**ONLY \$999.98**  
#77545



**Expression ONLY \$49.98**  
#73467

**SAVE \$100! Mac Zone Exclusive!**

**US Robotics 56K V90 Faxmodem**

**ONLY \$178.98**  
#60313



**Mac OS 8.1 Upgrade from 7.6**

**ONLY \$68.98\***  
#60602

\* After \$30 mfr. mail-in rebate for version 7.6 owners. Low Zone price: \$98.98.

**SHOP ONLINE!**

**Secure Online Shopping**

Order the products you want with confidence from maczone.com!

**maczone.com**



**GoLive CyberStudio 3.0**

**ONLY \$289.98**  
#71916

**Stuffit Deluxe 4.5, Spring Cleaning 2.0 & SpellTools**

**ONLY \$89.95**  
#00114



**Connectix Virtual PC 2 UPGRADE**

**ONLY \$32.98**  
#55394

## SPECIALIZED SERVICE

Corporate Sales 1-800-258-0882  
Government Sales 1-800-372-9663  
Education Sales 1-800-381-9663

## THE MAC ZONE • TRUSTED INTERNATIONALLY

Austria • Chile • Colombia • Denmark • France • Germany • Holland  
India • Israel • Italy • Japan • Kenya • Mexico • New Zealand • Norway  
Poland • Portugal • Singapore • Spain • Sweden • Switzerland  
United Arab Emirates • United Kingdom • Venezuela

International Sales 1-425-430-3570

Copyright © 1998  
The Mac Zone®  
is a registered trademark  
of Multiple Zones International,  
Inc. All rights reserved.





## We Carry the Full Line of Apple® Macintosh® Computers

- Over 6000 Products to Choose From!
- Cool Bundles and Hot Specials!
- Low Prices Everyday!
- Overnight Delivery Available

we're open  
**24** hours a day  
7 days a week

**CALL FOR  
YOUR FREE  
CATALOG!**



### 3 PowerMacs As Low As \$1699!

#### Apple® Power Macintosh® G3/233MHz Desktop

- 233MHz G3 processor
- 32MB RAM, exp. to 192MB
- 4.0GB hard drive
- 2MB VRAM
- 24X CD-ROM drive
- 3 PCI Slots

Monitor sold separately.

**ONLY  
\$1699  
#77039**



ATI 3D Rage II + 64-bit graphics and multimedia accelerator chip

1865 256MB Memory Upgrade ..... \$849.98

#### 300MHz is here! Apple® Power Macintosh® G3/300MHz Minitower

**NEW!  
\$4899  
#77014**

The wait is over! The fastest portables ever are here!

#### NEW Apple® PowerBook® G3 Series

- Up to 292MHz G3 processor
- Up to 64MB RAM
- Up to 8.0GB hard drive
- 12.1", 13.3" and 14.1" display available
- Up to 4MB VRAM
- 20X CD-ROM drive
- Built-in 10Base-T Ethernet

**NEW!**

**AS LOW AS  
\$2299**



- #56710 PowerBook G3 233MHz/32MB RAM/2GB HD ... \$2299.00
- #56730 PowerBook G3 233MHz/32MB RAM/2GB HD/56K ... \$2579.00
- #56740 PowerBook G3 233MHz/32MB RAM/2GB HD ... \$2999.00
- #56770 PowerBook G3 233MHz/32MB RAM/2GB HD ... \$3499.00
- #56750 PowerBook G3 250MHz/32MB RAM/4GB HD/56K ... \$3899.00
- #56780 PowerBook G3 292MHz/64MB RAM/8GB HD/56K ... \$5599.00
- #54478 64MB Memory Upgrade ..... \$279.98

## COMPLETE YOUR SYSTEM!

#### ViewSonic E771 15" Monitor

- 15.5" viewable area
- 7mm dot pitch
- 1280x1024 maximum resolution



**Great Low Price!**

**ONLY  
\$399<sup>98</sup>  
#76501**

**ViewSonic®**  
See The Difference!™

#### HP DeskJet 1120Cse Printer with PowerPrint

- Print on any size media from 4x6 inches to 13x19 inches
- HP PhotoREt II delivers the smallest ink drops for vibrant colors



**NEW!**

**ONLY  
\$589<sup>98</sup>  
#57715**

#### #1 best-selling organizer!

##### New! Palm III

- with MacPac
- New design
- New infrared feature
- New easy-to-read screen
- Additional 2MB RAM
- Store 6000 addresses, 3000 appointments, 1500 to-do's and 1500 memos



**ONLY  
\$399<sup>98</sup>  
#03858**

- #82099 PalmPilot Personal w/MacPac . \$199.98
- #82098 PalmPilot Pro w/MacPac ..... \$299.98

## FREE CD!

Loaded with software with any purchase from The Mac Zone.

#### Turbo Mouse 5.0

**ONLY  
\$99<sup>98</sup>  
#87483**



#87464 Mouse-In-A-Box .. \$39.98

#### Boca FastMac V.34 33.6 External Faxmodem



**ONLY  
\$49<sup>98</sup>  
#82765**

## SHOP ONLINE!

#### Daily Product Updates

Our exclusive vendor spotlights make the products you want easy to find!

**maczone.com**



#### Norton AntiVirus 5.0

**NEW VERSION!  
ONLY  
\$28<sup>98</sup>  
#00116**

10 mfc. mail-in rebate for upgrade/ competitive/crossgrade. Low price: \$68.98. Offer good 5/15/98 - 8/31/98. Limit one per customer.

## SHOP ONLINE!

#### Over 13,000 Products

Check for weekly specials, exclusive online promotions and blowout savings! Prices are updated daily.

**maczone.com**



#### X-Men The Ravages of Apocalypse (A Quake Add-on)

**ONLY  
\$19<sup>98</sup>  
#60137**

#74847 Quake ..... \$27.98



#### 32MB DIMMS AS LOW AS \$68<sup>98</sup>

**CALL FOR  
LATEST  
PRICES ON  
MEMORY.**

**CALL US TOLL-FREE!**  
or FAX your order to 425-430-3500

Shop online at

**www.maczone.com**

SOURCE CODE  
**MA807**

**1-800-304-0286**

A NASDAQ® COMPANY Ticker Symbol: MZON





Open: 9am-7pm M-F / 10am-4pm Sat. CST

E-Mail Us at: [owc@macsales.com](mailto:owc@macsales.com)



# ther World Computing

SERVING THE MAC UNIVERSE SINCE 1988

Competitive Prices, Quality Products and NEVER a Surcharge for Credit Cards!



## 800-275-4576

**On Web Commerce**  
Other World Computing has Easy, Fast, Secure Internet Ordering Now.



FAST!  
EASY!  
SECURE!

OWC

**Online Ordering Is Online Now**

[www.macsales.com](http://www.macsales.com)

- 24HR. ONLINE ORDERING & PRODUCT INFO
- DAILY UPDATED PRICES & SPECIALS

**Make Your Existing Mac Faster...**

**Faster**



**Even Faster Than The Fastest New G3 Mac!**

Get the full details on accelerating your Macintosh On Our Website!

[www.fastermacs.com](http://www.fastermacs.com)

## PROCESSORS

### XLR8 by Interex G3 DaughterCard

**Upgrades** for all 7300/7500/7600/8500/9500/8600/9600, Umax 1700 & S900, PowerComputing PowerCenter(&Pro), PowerCurve, PowerTower(&Pro), and PowerWave Systems.

Mach G3/220mhz w/512k Cache 2:1	\$489
Mach G3/233mhz w/512k Cache 2:1	\$569
Mach G3/266mhz w/512k Cache 2:1	\$719
Mach G3/300mhz w/1mb Cache 1.33:1	\$1299

**604&604e Daughtercards from PowerComputing**

**604/150mhz**

Compatible with 7300/7500/7600/8500/9500's; PowerComputing PowerCenter, PowerCurve, PowerTowers, and Umax S900 & J700 computers.

**604e/180mhz** ..... **\$129**



Sleeker.  
But Definitely Not Meeker!

### G3 PowerMacs

G3/233 Desktop 32/4GB/24X/KB/Mouse	\$1499
G3/266 Desktop 32/4GB/24X/Zip/KB/Mouse	\$1799
G3/233 MiniTower 32/4GB/24X/56.6k/KB/Mse	\$1829
G3/266 MiniTower 32/6GB/24X/Zip/AV/KB/Mse	\$2259
G3/300 MiniTower	\$2949

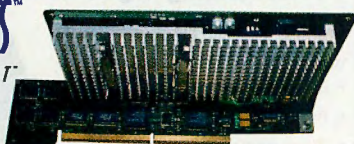
### New G3 PowerBooks

G3/233 Dual-Scan 12.1" 32/2GB/20X CD	\$2199
G3/233 Dual-Scan 12.1" 32/2GB/20X/56k Modem	\$2479
G3/233 TFT 13.3" 32/2GB/20X CD	\$2819
G3/233 TFT 14.1" 32/4GB/20X CD	\$3289
G3/250 TFT 13.3" 32/2GB/20X/56k Modem	\$3649
G3/292 TFT 14.1" 64/8GB/20X/56k Modem	\$5269

**IN STOCK NOW**

**Turn Your 601 Mac into a G3 Mac!**

**SONNET**  
SIMPLY FAST™



Sonnet Technology

Crescendo G3 Upgrades for Performa 61xx Series, PowerMac 61/71/8100 Series, WGS 6150/7150/8150, Radius 110

Crescendo G3/225mhz	\$479
Crescendo G3/260mhz	\$659

## MAC BATTERIES

3.6v Lithium Clock/PRam Battery for Mac II Series/LC II,III,400 Series/Quadra 475,610,660av,700,800,840av, Most PowerMacs. **\$9.95**

4.5v Lithium Clock/PRam Battery Quadra/Performa/LC 630,631,635,637, 638,640s, PowerMac 4400s. **\$15.95**

POWER TO PLAY



**TECHWORKS**

**Power3Dfx PCI only \$189**

Bundled with these awesome 3D games:

Quake™: Episode 1  
MechWarrior® 2  
VR Soccer™  
Weekend Warrior™

**Upgrade your PowerPC to a Power Arcade!**

**Play "PC" 3Dfx Games on your PowerMac with Connectix Virtual PC!**

**Connectix Virtual PC** ..... **\$149**

## L2 CACHE

### Level 2 Cache for 6100/7100/8100 & Performa 611X Series Computers

Level 2 Cache increases the efficiency of your computer by allowing it to keep often used instruction processes in fast cache memory. Please note: 6100/66, 7100/80, & All 8100s included 256k L2 from Apple Factory.

Motorola 256k L2 Cache - **\$15**

Adding this cache to a computer without a functional cache installed will increase performance by up to 40%.

IDT 1024k L2 Cache - **\$149**

UP TO 53% PERFORMANCE BOOST!

### Level 2 Cache for 7200/7300/7500/7600/8500/8600, Certain PowerComputing & Umax Models

Please note: 7200/120, All 73/76/85/8600s include 256k L2 Cache, as well as some PowerComputing/Umax models.

256k L2 Cache - **\$49**    512k L2 Cache - **\$79**    High Speed 1024k L2 Cache - **\$129**

Good for up to 60mhz bus speed!

### Level 2 Cache for PowerMac & Performas 5400/5500/6360/6400/6500, StarMax Computers/clones, PowerComputing PowerBase Computers, & Umax c500/c600 Computers.

Please note: 6400/200, All 6500s, & Some PowerBase come with 256K L2 Factory Installed

512k High Performance Level 2 Cache - Up to 53% Performance Boost..... **SPECIAL \$49**

1024k High Performance Level 2 Cache - Up to 70% Performance Boost ..... **\$169**

**ACCELERATE WITH CONFIDENCE!**

All acceleration products purchased from OWC have a 30 Day Money-Back Guarantee!



**Atlantic Technology MultiMedia 50 Watt 3Pc Subwoofer / Loudspeaker System**

Deep, Clean Sound for Music & Explosive Gaming **ONLY \$99**

**TOP RATED**

**30 DAY MONEY BACK GUARANTEE**  
ON SPEAKERS AND 3DFX PRODUCTS

**Other World Computing**  
224 West Judd St., Woodstock, IL 60098  
International: (815) 338-8685  
Fax: (815) 338-4332



Prices, availability, and specification subject to change without notice. Items not covered by 30 Day Money back guarantee subject to 15% restocking fee if returned for credit. Returns for credit accepted within 30 days of purchase only.





# Other World Computing

SERVING THE MAC UNIVERSE SINCE 1988



Competitive Prices, Quality Products and NEVER a Surcharge for Credit Cards!



## 800-275-4576

OWC is an authorized  
Techworks  
Reseller



Power To Perform™

30 Day Money Back Guarantee  
Lifetime Replacement Warranty



### 72 PIN SIMMS 2k Refresh 60/70/80ns (specify)

for Apple LCIII; Performa/LC 475,476,477,575,577,578,580;  
Centris/Quadra/Performa 605,610,630,631,635,637,638,660av,  
800,840av; PowerMac/Performa 6100,6110,6112,6115,7100, &  
8100 Series computers. Also comp. w/ Apple 610 & 6100 Das Cards.

4 MEG.....\$9      8 MEG.....\$19  
16 MEG.....\$29      32 MEG.....\$57

### Techworks G3 SDRAM Spectacular!

SDRAM Modules for  
all G3  
PowerMacs

4 MEG G3 Video SGRAM \$49 !!!!!

### Video Ram Memory Upgrades

256k PMac 7100/Quadra800/650 .....\$15  
512k PMac 8100/Quadra's/LC's .....\$25  
1MEG PMac 72/75/76/8500 & Comp. ....\$19  
1 MEG PCI Das Card Upgrade .....\$25  
4 MEG Motorola StarMax/4400 PMac .....\$49

### Internal & External SCSI Hard Drives

All hard drives ship preformatted with FWW HD Tool Kit PE 2.5 and over 30mbs of shareware/freeware/public domain software installed. External Drive enclosures have a 40 Watt Universal Auto-Switching Powersupply, Push Button ID Selector, Dual SCSI Ports, High-Capacity UltraQuiet Cooling Fan, and include power cable and SCSI Cable.

FWW HD Tool Kit v2.5 Included with all Hard Drives  
30 Day Money Back Guarantee Full Manufacturer Warranty



SUPPORTS HFS+

		Internal	External
Quantum 2.1gb Fireball SE	5400rpm 128k Cache 9ms w/3yr	\$199	\$249
Quantum 2.2gb Atlas II	7200rpm 512k Cache 8ms w/5yr	\$189	\$239
Quantum 2.2gb Viking	7200rpm 512k Cache 8ms w/5yr	\$169	\$219
Quantum 3.2gb Fireball SE	5400rpm 128k Cache 9ms w/3yr	\$249	\$299
Quantum 4.3gb Fireball SE	5400rpm 128k Cache 9ms w/3yr	\$289	\$339
Quantum 4.5gb Atlas II	7200rpm 512k Cache 8ms w/5yr	\$399	\$449
Quantum 6.4gb Fireball SE	5400rpm 128k Cache 9ms w/3yr	\$359	\$409
Quantum 8.4gb Fireball SE	5400rpm 128k Cache 9ms w/3yr	\$459	\$509
Quantum 9.1gb Atlas II	7200rpm 1024k Cache 8ms w/5yr	\$599	\$649
Fujitsu 9.1gb	7200rpm 512k Cache 8.5ms w/5yr	\$489	\$539

Initio Miles SCSI Narrow/UltraWide PCI Interface w/Conley SoftRaid .....\$209

Call or Visit [www.macsales.com](http://www.macsales.com) for our line of UltraWide SCSI Drives and Enclosures

### SCSI Removable Storage Devices, CD-Rom, & CD-Recordable Products

Iomega Zip 100mb w/1 cartridge .....\$149  
Zip Plus 100mb w/1 cartridge .....\$179  
Iomega Jaz 1gb w/1 cartridge .....\$279  
Zip 100mb Carts \$12 ea. / Zip 10pk \$99 / Jaz 1gb Carts \$85 ea. / Jaz 5pk \$399  
Zip / Zip Mounting Kit for Apple Computers \$10 (with zip/jaz purchase)

Yamaha CDRW 4260 2x ReWritable 4X Record 6X Read  
w/ cables, 1 CDRW & 1 CDR Media, & Toast v3.5 .....\$549 \$599

CDR Gold Media \$2.99 ea. / 10pk \$24.99 / 25pk \$49.99 / 100pk \$179 (Includes Jewel Case)

### 30 PIN SIMMS for Older Macs 70 or 60ns (Specify)

1 MEG.....\$9      4 MEG.....\$15  
8 MEG.....\$59      16 MEG.....\$99

### 3.3v EDO 168 PIN DIMMS 60ns

for Motorola StarMax, APS, PowerTools Clones & Apple  
PowerMac 4400

16 MEG \$59      32 MEGABYTE .....\$69  
64 MEGABYTE .....\$119

### 5v 168 PIN DIMMS 2K Refresh 60ns

for Apple 5400/6360/6400/7200/7300/7500/7600/  
8500/9500 & Compatible PowerComputing & Umax Computers.

8 MEG \$29      16 MEGABYTE .....\$39  
32 MEG \$62      64 MEGABYTE .....\$109  
128 MEGABYTE .....\$469

### 5v EDO 168 PIN DIMMS 2K Refresh 60ns

for Apple 5500/6500/8600/9600, PowerComputing PowerBase,  
& Umax C500/C600 Computers Will Also work in all machines  
utilizing non-EDO 5v memory dimms except Apple 7200.

16 MEG \$39      32 MEGABYTE .....\$59  
64 MEG \$107      128 MEGABYTE .....\$449

### On Web Commerce



FAST!  
EASY!  
SECURE!

OWC

### Online Ordering Is Online Now

[www.macsales.com](http://www.macsales.com)

- 24HR. ONLINE ORDERING & PRODUCT INFO •
- DAILY UPDATED PRICES & SPECIALS •



### PowerBook MEMORY

#### PowerBook 3400 & G3 Models

32 MB.....\$99      64 MB.....\$169  
96 MB.....\$259      128 MB.....\$319

#### PowerBook 1400 Stackable Memory

16 MB.....\$79      24 MB.....\$99

#### PowerBook 5300/190/500 Series (PLEASE SPECIFY)

16 MB \$89      32 MB.....\$119      48 MB.....\$199

#### PowerBook Duo Series Memory \* FOR 5300 ONLY

16 MB.....\$99      20 MB.....\$139  
24 MB.....\$129      28 MB.....\$149  
32 MB\*.....\$159      36 MB.....\$179  
40 MB.....\$189      48 MB\*.....\$199  
\* FOR 2300 ONLY

### IDE

30 Day MoneyBack Guarantee on all SCSI & IDE Hard Drives!

#### IDE 3.5" Internal Hard Drives

IDE 3.5" Drives for Performa/Quadra 630,5200,5300,5400,6200,6300,  
6400, & 6500 Series Computers; StarMax, APS, and PowerMac 4400 computers.

Quantum 2.1gb Fireball SE 5400rpm 9.5ms 3yr .....\$149  
Quantum 3.2gb Fireball SE 5400rpm 9.5ms 3yr .....\$179  
Quantum 4.3gb Fireball SE 5400rpm 9.5ms 3yr .....\$199  
Quantum 6.4gb Fireball SE 5400rpm 9.5ms 3yr .....\$269  
Quantum 8.4gb Fireball SE 5400rpm 9.5ms 3yr .....\$339

### PowerBook STORAGE

#### New 2.5" SCSI Drives

for PowerBook 100 Series (except 150), 500 Series, Duo 210, 230, 250, 270 & 280 Computers

810 Mb Toshiba 12ms SCSI 3 Year Warranty.....\$349

1Gb Apple SCSI 13ms w/1 Year Warranty....\$299

#### New 2.5" IDE Drives for Pb150/190(cs)/5300/1400/3400

750 Mb Apple IDE 13ms 1 Yr LIMITED SUPPLY!..\$99

1.2 Gb Apple IDE 13ms 1 Year Warranty.....\$149

2.1 Gb Hitachi 4436 RPM 12ms 3 Year Warranty..\$199

3.2 Gb Toshiba 4200 RPM 13ms 3 Year Warranty..\$269

3.2 Gb Hitachi 4436 RPM 12ms 3 Year Warranty...\$319

4.0 Gb IBM 4200 RPM 13ms 3 Year Warranty.....\$369

5.0 Gb IBM 4200 RPM 13ms 3 Year Warranty.....\$499

Call or visit our website for other models

### Other World Computing

224 West Judd St., Woodstock, IL 60098

International: (815) 338-8685

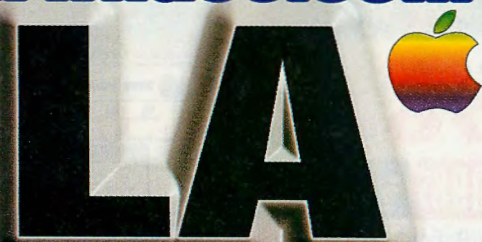
Fax: (815) 338-4332



Prices, availability, and specification subject to change without notice. Items not covered by 30 Day Money back guarantee subject to 15% restocking fee if returned for credit. Returns for credit accepted within 30 days of purchase only.



**800-689-3933**  
**www.lacc.com**



**Computer center**

- Corporate Accounts Welcome
- Business Leasing Available
- Reseller Inquiries Welcome
- Fortune 1000, University, School, & Government Purchase Orders Accepted
- We Also carry Toshiba, Compaq, IBM notebooks.

**Monitors**



**RASTEROPS**  
MC7515 19" 22DP  
1600X1200 Monitor  
**\$799.**

Mo 620 17" 28dp 1152X870 449.  
Mo 6315 17" 22dp 1280X1024 579.  
Mo 7515 19" 22dp 1600X1200 799.  
Mo 801 21" 22dp 1600X1200 1149.  
Mo 2111 21" 22dp 1600X1280 1099.

**17" 22DP**  
1600X1200 Monitor CM611  
**\$449!**

**21" 22DP**  
1600X1200 Monitor CM2110  
**\$949!**

**21" 22DP**  
1600X1280 Monitor MC801HR  
**\$1249!**

**SONY**

Sony 100ES/GS 299./329.  
Sony 200ES/17 529.  
Sony 200GS/PS 589./739.  
Sony 400PS 929.  
Sony 20SE II 20" 1049.  
Sony 500PS 1249.

**Scanners**

Agfa Arcus II Full Photo Shop 1249.  
Agfa Arcus II Solo 1199.  
Agfa StudioStar w/LE Photo 699.  
Umax Astra 6105 w/Photo Dlx. 149.  
Umax Astra 1200S w/Photo Dlx. 249.  
Umax Astra 1200S w/Photo full 449.  
Umax Powerlook II w/ Photo Full 1249.  
Umax Powerlook III w/ Photo Full CALL.  
Umax Powerlook 2000 CALL.  
Umax Powerlook 3000 CALL.  
Microtek ScannerMaker III Full Photo/Trd. Afx. 1349.

**Monitors**

**NEC**

A500 15" 1280x1024 28dp 279.  
E500 15" 1280x1024 25dp 299.  
A700 17" 1280x1024 28dp 469.  
P750 17" 1600x1200 25dp 749.  
P150 21" 1600x1200 28dp 1149.  
E1100 21" 1600x1200 28dp 1049.  
XP37+ 39" 1024x768 85dp 7399.

**radius**

Precision View 21" 1599.  
Pressview 21" SR w/o calibrator 2699.  
Pressview 21" SR w/calibrator 2999.  
Photo DV PCI w/Firewire Card 369.  
Thunder Power 30/1920 649.  
Thunder TX 1152 899.  
Colormatch Daylight 2299.  
Precision Color 24/1600 PCI 479.  
Video Vision 2.0 w/After Effects 2299.

**ViewSonic**

EA771 17" 1024x768 w/spkrs 28dp 469.  
G771 17" 1024x768 27dp 439.  
G790 19" 1280x1024 28dp 799.  
P775 17" 1600x1280 25dp 489.  
PT775 17" 1600x1200 25dp 649.  
G800 20" 1600x1200 28dp 929.  
P815 21" 1600x1200 25dp 1199.  
G810 21" 1600x1200 28dp 999.  
P810 21" 1600x1200 25dp 1099.  
View Pannel VPA 150 1399.

**Apple Monitors**

Apple 15" AV 329.  
Apple 1705 17" 449.  
Apple 1710 17" 449.  
Apple 720 17" 549.  
Apple 750 17" 679.  
Apple 750 AV 17" 779.  
Apple 850 20" 1399.  
Apple 850 AV 20" 1599.

**Apple Processors**

Apple 132 MHz 604e 129.  
Apple 150 MHz 604e 199.  
Apple 200 MHz 604e 299.  
Apple 233 MHz 604e 399.  
Apple 300 MHz 604e 699.



**newer tech**

MAXpower G3 for 61XX, 7100 & 8100 Processors  
MAXpower G3 210MHz 750 512k BC@ 105MHz 449.  
MAXpower G3 240MHz 750 1MB BC@ 160MHz 649.  
MAXpower G3 for 61XX, 7100 & 8100 Processors  
MAXpower G3 210MHz 750 512k BC@ 105MHz 549.  
MAXpower G3 240MHz 750 1MB BC@ 160MHz 749.  
MAXpower G3 for 7300, 7500, 7600, 8500, etc.  
MAXpower G3 220MHz 750 512k BC@ 110MHz 599.  
MAXpower G3 250MHz 750 512k BC@ 125MHz 849.  
MAXpower G3 266MHz 750 1MB BC@ 133MHz 949.  
MAXpower G3 275MHz 750 1MB BC@ 183MHz 1199.  
MAXpower G3 275MHz 750 1MB BC@ 275MHz 2049.

**FedEx**

WE SHIP WORLDWIDE  
NEXT DAY SHIPPING  
SAME DAY SHIPPING

Terms & Conditions: All prices are cash discounts. We accept VISA, MC, Amex & Discover. CDO orders will be placed by Cashier's Check, Money Order, or Certified Check only. Purchases orders will be accepted from qualified companies upon approval. Customers must pay for all shipping & insurance fees. Due to unforeseen charges in the market, prices, products & delivery are subject to change without notice. Not responsible for typographical errors. Prices given at the time of the sale are final. Shipping, insurance and CDO fees are non-refundable. No returns will be given after 3 days. 15% restocking fee on all returns. All returns must have an RM number. All returns must have all original packing materials, manuals, warranty cards & all accessories. Trademarks are registered with their respective companies. No refunds on software & hardware. Ask for warranty and details at the time you are placing an order.

All prices subject to change without notice • All Prices reflect cash discount • \* reflects Factory refurbished units

**LEASING**

- FAST APPROVAL
- THREE BUYOUT OPTIONS
- TAX DEDUCTIBLE
- BUSINESS LEASING
- VERY LOW YIELD RATES
- ASK FOR THE LEASING DPT.

**Macintosh PowerMac's**

**4400/200 DOS**  
• 32MB  
• 2GB  
• 12xCD  
• DOS Card  
**\$1149** Lease it for \$ 44/month

**G3 233MHz**  
• 32MB  
• 4GB  
• 24xCD  
• Desktop  
**\$1399** Lease it for \$ 58/month

G3 300MT 128/2x4GB/24x8MB 3999/143  
G3 300MT 64/4GB/24x8MB 2899/111  
G3 266MT 128/4GB Wide 24x8MB VR 3199/114  
G3 266MT 32/6GB/24x512K/Zip 2199/84  
G3 266DT 32/4GB/24x/Zip 1599/60  
G3 233MT 32/4GB/24x/56k 1699/65  
9600/350 64/4GB/24xCD 2699/103  
9600/300 64/4GB/24CD 1699/65  
9600/300 64/4GB/24CD/Zip 1499/57  
9600/233 32/4GB/12xCD 1299/49  
9600/200 00/CD 1899/67  
9600/200MP 32/4GB/12xCD 1899/67  
9600/300 64/4GB/24x/zip 1899/67  
8600/250 32/4GB/24x 1699/65  
8600/200 32/2GB 1399/53  
8500/180 32/2GB/8xCD 1199/46  
8500/150 16/2GB 899.  
7600/132 16/1.2GB 1199/46  
7300/200 32/2GB/CD/KBD. 1099/44  
7300/180 16/2GB/12xCD/KBD. 899.  
4400/200 16/2GB/CD/KBD. 899.  
4400/200 32/2GB/12xCD COMP. 1149/45  
6500/225 32/4GB/12xHDD 899.  
6500/250 32/4GB/CD/56K 399.  
6500/300 32/4GB/CD/33.6/AVID 1399/53

**Macintosh Performas**

Monitor sold Separately



6380/120" 16/1.2GB/CD 699.  
6400/200" 16/2.4GB/CD/VE 999.  
6400/200 16/2.4GB/8xCD 899.  
6400/180 16/1.6GB/8xCD 799.  
6400/330DS 12/500/CD/DOGS 799.  
6300/120" 16/1.2GB/4xCD/TV 699.  
6320/120 16/1.2GB/4xCD/TV 699.  
6220/75" 8/1.2GB/4xCD 699.  
6200/75 8/1.2GB/4xCD 699.  
5400/120" 16/1.6GB/CD/HIS built in 699.  
5200/75 8/800/CD 699.  
LC580 8/800 699.

**VST**

Powerbook Batteries for 1400,5300,190 119.  
Zip 100MB For 5300 & 150 269.  
Charger for 1400 w/AC adapter 129.  
Charger for 1400 battery & Apple ac Adapt. 229.  
3400 Mobility Bundle (Charger, AC & Batt) 299.  
3400 Apple Li-Ion Battery 149.  
Auto Adapter for 3400,1400 & G3 95.  
Power Adapter 3400,5300,G3 & 190 149.  
Charger 3400,5300,G3 & 190 149.  
Apple AC Adapter 3400 & 1400 65.

**Powerbook 3400,1400 G3, & 5300**  
**\$269**

**WACOM**

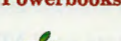
Ariz 4x5 129.  
Ariz 6x8 279.  
Ariz 12x12 379.  
Ariz 12x18 599.

**USRobotics**

Sportster 56K 189.  
Sportster 56K PCMCIA 249.  
Sportster 33.6K 139.

Visit Us At Our Web Site <http://www.LACC.com>  
24Hrs A Day -- On-Line Catalog & Ordering  
E-Mail us at: [lacc@lacc.com](mailto:lacc@lacc.com) or Call us at (800) 689-3933

**Macintosh Powerbooks**



**1400c/166**  
• 16MB  
• 2GB  
• CD  
**\$1699** Lease it for \$ 65/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**3400c/240**  
• 16MB  
• 3GB  
• 12xCD  
**\$2799** Lease it for \$ 107/month

**Macintosh Workgroup Servers**

9650/350 64/4GB/20x/Dat Apple Share CALL.  
9650/233 64/4GB/12x/Dat Apple Share CALL.  
9650/233 48/4GB/12x/Internet Hard CALL.

**Powerbook Hard Drives**

1.4GB Toshiba 1401MAV 12ms 179.  
2.1GB Toshiba 2103MAV 12ms 229.  
3 GB Hitachi Slim 12ms 349.

**iomega**

Jaz 2GB Drive External SCSI 499.  
Jaz Drive Internal SCSI 249.  
Jaz Drive External SCSI 269.  
Zip Drive Internal SCSI 149.  
Zip Drive External SCSI 139.  
Zip Drive Plus SCSI & Parallel 189.  
iomega BUZ 189.  
3/5 Pack Jaz Cartridges 239/389.  
1/10 Pack Zip Cartridges 13/129.  
Single Cartridges for Jaz 85.

**Internal Hard Drives**

Quantum Atlas 2.1GB SCSI 3.5 249.  
Quantum Strata 2.1GB SCSI 3.5 209.  
Quantum Strata 4.3GB SCSI 3.5 289.  
Quantum Atlas II 4.5 Ultra SCSI AV 3.5 399.  
Quantum Atlas II 4.5 Ultra Wide SCSI AV 3.5 449.  
Quantum Atlas II 9.1 Ultra SCSI AV 3.5 699.  
Quantum Atlas II 9.1 Ultra Wide SCSI AV 3.5 749.  
Seagate ST34555N 4.5 SCSI 7200RPM 10.5ms 279.  
Seagate Cheetah 4.3 Ultra SCSI AV 10000RPM 529.  
Seagate ST3437N 4.3GB Ultra SCSI 3.5 AV 599.  
Seagate ST3437W 4.3GB Ultra SCSI Wide 3.5 AV 449.  
Seagate Cheetah 5.1GB Ultra SCSI AV 10000RPM 1049.  
Seagate Cheetah 9.1GB Ultra W SC AV 10000RPM 1099.

**Printers**

HP LaserJet 6L/XP/6Xi 385./729.  
HP LaserJet 6MP/5M 849./1399.  
HP LaserJet 55N 949./1199.  
HP LaserJet 4V/4MV 1699./1999.  
HP LaserJet 5MX 3399.  
HP OfficeJet 590/1150C Pro 599./939.  
HP 4000 N 1399.  
HP 4000TN 1499.  
HP 5000N 1899.  
HP 5000GN 2399.

**EPSON**

Epson Stylus Color 600/800 199./279.  
Epson Stylus Color 850 379.  
Epson Stylus Photo 700 279.  
Epson Stylus Color 3000 1679.  
Epson Stylus Photo 299.  
Epson Stylus Pro XL 329.  
Post Script for Pro XL 249.  
EpsonNet for Pro XL 349.

**Apple**

Apple Laser 12/640 999.  
Apple Laser 16/600PS 1199.  
Apple Laser 8500 1899.  
Apple Laser Writer 4/600\* 649.  
Apple StyleWriter 1500 CALL.  
Color Portable 2200 299.

**Tektronix**

Phaser 140 COLOR CALL.  
Phaser 350 COLOR CALL.  
Phaser 360 COLOR CALL.  
Phaser 380 COLOR CALL.  
Phaser 550 COLOR CALL.  
Phaser 560 COLOR CALL.

**Now On Sale!!!!!!**

**EPSON Stylus Pro XL**

Prints up to 12.5" x 18" Full bleed. 720x720dpi Photo quality color printing with Microdot Technology.  
(Comparable to Epson Stylus 3000)

Limited Quantity on Hand!!!

**\$329\***

Post Script Option \$249.

Ethernet Option \$349.

4 year On-Site Warranty \$97.

**PHILIPS/MAGNAVOX 4 YEAR ON SITE WARRANTY!**

ASK YOUR SALES REP REGARDING EXTENDED ON-SITE WARRANTY ON NEW AND REFURBISHED PRODUCTS.

THE ON-SITE WARRANTY BEGINS 31 DAYS AFTER THE INVOICE DATE IN MOST SITUATIONS.

**\$701 to \$1200 \$1201 to \$2000 \$2001 to \$3000 \$3001 to \$4000 \$4001 to \$5000 \$5001 to \$7500 \$7501 to \$10000 \$10001 to \$15000**

**\$157.99 \$185.99 \$217.99 \$261.99 \$291.99 \$343.99 \$431.99 \$552.99**



MAAd#  
0798 **Personal & Business**  
**Leasing By** PFO  
CAPITAL



All prices are based on C.O.D. order  
& subject to prior sales & change!

\* Factory refurbished with Warranty

© Limited Quantity While Supply Last!

# COMPU-D

International, Inc.

6741 Van Nuys Blvd., Van Nuys, CA 91405

Sales (818) 787-3282

Fax (818) 787-5555

e-mail: csales@compu-d.com

## 1-800-929-9333

www.compu-d.com



Fast Worldwide  
Shipping

### Apple NEW G3 PowerMacs

G3/300 Tower 128-2x4GB, 24xCD	\$3995
G3/300 Tower 64-4GB, 24xCD	\$2895
G3/233 MT. 32-4GB, 24xCD, 56K	\$1765
G3/266 Desktop 32-4GB, 24xCD, Zip	\$1765
G3/266 Tower 32-6GB, 24xCD, Zip	\$2195
G3/266 Tower 128/4GB, 24xCD	\$2995
G3/233 DT. 32-4GB, 24xCD, Kb.	\$1395



### Apple NEW G3 PowerBooks

G3/292 64/8GB, 20xCD, 56K, Eth., 14.1" TFT	\$4995
G3/250 32-4GB, 20xCD, 56K, Eth., 13.3" TFT	\$3588
G3/250 32-5GB, 20xCD, 56K, Eth., 12.1" TFT	CALL
G3/233 32-2GB, 20xCD, Floppy, Eth., 14.1" TFT	\$3295
G3/233 32-2GB, 20xCD, Floppy, Eth., 13.3" TFT	\$2845
G3/233 32-2GB, CD, Floppy, 56K, Eth., 13.3" TFT	\$2445
G3/233 32-2GB, 20xCD, Eth., 12.1" DSTN	\$2195

### PowerMacs

9600/350 64-4GB, 24xCD, Zip, Kb.	\$2599
9600/300 64-4GB, 24xCD, Zip, Kb.	\$2195
9600/200MP 32-4GB, CD, Kb.	\$1795
8600/300 32-4GB, 24xCD, Kb.	\$1799
7300/180 DOS P/166, 32-4GB, CD	\$1699
7300/180 16-2GB, 12xCD, Kb.	\$1195
6500/250 32-4GB, CD, 56K	\$995
4400/200 16-2GB, CD, 256k	\$995

### Video/Graphic Cards



<b>Exclaim VR 3D Rage II</b>	
4MB vram	\$289
8MB vram	\$359
Turbo TV	\$89
Twin Turbo 128M4	\$249
Twin Turbo 128M8	\$389
ix3D Ultimate Rez	CALL
ix3D Pro Rez	CALL
ix3D Mac Rocket	CALL



### PowerBooks

3400c/240 32-3GB, CD	\$2395
2400C/180 16-1.3GB	\$1595
1400c/166 16-2GB, 8xCD	\$1645
1400cs/166 16-1.3, 12xCD	\$1445
5300cs/100* 16-500 14.4 Modem	\$777*
DVO 2300C 40-1.1GB	\$1095
DVO 2300C* 8-750MB, Fax/Mdm	\$895*
Ext. Floppy Adapter	\$188

### Scanners

AGFA



Arcus II	\$1175
DuoScan	\$2975

UMAX  
The Magic of Color™



Astra 610P (\$20 Rebate)	\$117
Astra 610S (\$20 Rebate)	\$117
Astra 1220P 1200dpi	\$229
Astra 1220S 1200dpi	\$229
PowerLook II	\$1289

### SOFTWARE



Photoshop 4.0.1	\$395
Illustrator 7.0	\$269
PageMaker 6.5	\$325
Acrobat 3.0.1	\$119
PageMill 2.0	\$99
ATM Deluxe 4.0	\$69
StreamLine 4.0/Dimension 3.0	\$139/129
After Effects 3.1/Premiere 4.2	\$379/369
After Effects Production Bundle	\$1395
QuarkXpress 4.0	\$689



Macromedia

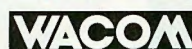


Freehand 8.0	\$249
Bryce 3D	\$159
Kai's PowerTools 3.0	\$99
Painter 5.0	\$239
Expression	\$149

Microsoft

Office 98 for Mac	\$289
Excel 98 /Word 98	\$179/189

### Graphic Tablets



We will beat any competitive Price

ArtPad II 4x5	\$119
ArtZ II 6x8/12x12	\$259/369
ArtZ II 6x8/12x12 with CorelDraw 8	\$469/569
ArtZ II 6x8/12x12 with Freehand 8	\$439/539
ArtZ II 6x8/12x12 with Photoshop 4	\$439/539
ArtZ II 6x8/12x12 with Painter 5	\$499/599
ArtZ II 6x8*/12x12*	\$195/289
ArtZ II 12x18" Sheet Format	\$389
ArtZ II 12x18" Electrostatic Format	\$449
Ultra-Pen with Eraser	\$87
Ultra-Wide Body Pen with Eraser	\$119

### Printers



4/600PS\* \$575

LaserWriters

16/600PS \$1095

16ppm, 600dpi, 8MB, Mac & PC w/Ethernet

StyleWriter 4100/6500 \$239/435

PC

TOSHIBA

www.toshibadeals.com

Libretto 50CT, P75, 16/810MB, 6.1" TFT \$1099

Tecra 730XCDT, P150, 16/2.1GB, 12.1" TFT \$1499

IBM www.ibmdeals.com

ThinkPad 380D, P150, 16/2GB, 12.1" TFT \$1345

ThinkPad 380D, P150, 32/4GB, 12.1" TFT \$1595

COMPAQ www.compaqdeals.com

Full Line of Desktop & Notebooks

DeskPro, Proliant, Presario, Armada, LTE

### STORAGE



Zip Drive /10 Pack Crtirde	\$137/95
Jaz Drive SCSI /3 Pack Crtirde	\$299/225
Zip+ SCSI & Parallel /Jaz II	\$179/569
Quantum Atlas 9GB SCSI / Ext.	\$749/799
Seagate Hawk 4.5GB SCSI-II, 7200 rpm, 8.5 m.s.	\$289
PowerBook 3.2 GB IDE 2.5"	\$239
5.0 GB IDE 2.5"	\$539

### Disaster Recovery Sytem

Seagate 3.2GB Parallel, Ext. STT63200P-R	\$195
Seagate 8GB IDE, Int. STT28000A	\$229
Seagate 8GB SCSI, Ext. STT28000N	\$259

### Parts & Accessories



Apple 1400C NIMH Battery \$99

3400C Lithium Battery \$99

### Upgrade your PowerMac to G3

220/110MHz	512K Cache	\$595
250/125MHz	512K Cache	\$699
266/133MHz	1MB Cache	\$889
275/183MHz	1MB Cache	\$1099
300/300MHz	1MB Cache	\$1895
300/150MHz	1MB Cache	\$1245

We Offer the Best Price on MEMORY.

PM.16/32/64MB \$45/79/129

PB.16/32/64MB \$65/115/225

Apple Design Keyboard \$45

Apple Adjustable Keyboard \$89\*

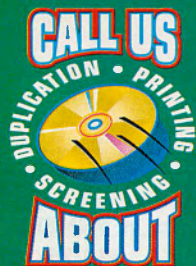
Apple Extended Keyboard \$129

www.compu-d.com 1-800-929-9333 www.compu-d.com



# www.mam.amc-direct.com

AMC is  
the Leader  
in CD-R  
Duplication,  
Printing and  
Silkscreening  
Services!  
Call us  
for details!



MA0798



\$49.99

**MITSUI**  
GOLD

**FREE SHIPPING!**

## MITSUI GOLD CD-R MEDIA

Mitsui Gold CD-R Media is simply the best in the industry and the only media to come with a lifetime warranty. You can't buy better media at a lower price anywhere!

Mitsui-Gold 25-pack (includes shipping).....\$49.99  
Mitsui-Gold 100-pack .....**CALL US!**  
Quantity pricing as low as \*1.69 ea.

## CD-R DUPLICATORS



Buy NOW and  
receive a 100 pack  
of Mitsui Gold  
Media FREE!\*

\*Offer good only on  
selected MediaFORM  
CD-ROM Duplicators

\$5,699.

### MEDIAFORM CD-2701

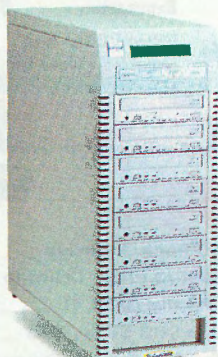
Simplify your CD-R production. The CD-2701 delivers both simple operation and unattended duplication of up to 50 CD-Rs. Spindle based operations eliminates any handling by you or production staff.

### CD-4004 CD2CD DUPLICATOR

**MediaFORM**

starting at:

\$2,399.



starting at:

\$3,599.

### CD-5900 8 CD DUPLICATOR

CD-4004 (1-3) CD Duplicator .....starting at \$2,399.  
CD-5900 (1-8) CD Duplicator .....starting at \$3,599.  
CD-2601 36 CD Duplicator .....\$4,799.



## CD-R PRINTERS

**FARGO**  
ELECTRONICS, INCORPORATED



\$1,195.\*

### FARGO SIGNATURE COLOR CD PRINTER

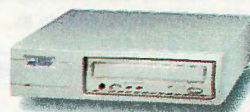
The new Signature CD Color Printer from FARGO is the perfect way to add a professional high quality touch to your CD-R's.

**FREE SHIPPING!**

AMC 720dpi Color CD Printer.....\$849.  
Fargo Signature Color CD Printer .....\$1,195.  
\*Includes FREE 10-pack of Printable Media!

## CD-R RECORDERS

\$829.



\$489.

### AMC 2-Hi COMBINATIONS

AMC's 2-Hi's combine a CD-Recorder & 1GB Jaz or 1.5 GB SyJet Drive for the ultimate CD Master Station! Software available for Mac or PC's.

AMC 4x8 Recorder .....Int. \$399. Ext. \$489.  
Yamaha 4x2x6 CD-RW .....Int. \$499. Ext. \$579.  
Matsushita 4x8 Recorder ....w/Jaz \$829. w/Syjet \$849.  
Yamaha 4x2x6 Rewritable ...w/Jaz \$899. w/Syjet \$929.

## CD-ROM CHANGER

### AMC/NAKAMICHI DISC CHANGER



**Nakamichi**

\$349.

P.O. Box 3456 Redmond, WA 98073-3456 Fax 425.861.8391  
**888-558-3128**



**ADVANCED  
MULTIMEDIA  
CONCEPTS**



MWAd#  
0798CM

**Sales**

(818)787-1054

Same Day Shipping



**ComputerMall**  
Your Premier Computer Source



**Fax**

(818)787-2111

Prices Are Based on C.O.D. Order &  
Subject to Prior Sales & Change!  
\* Factory refurbished with Warranty

**800-977-5665**

**www.computerstogo.com**



**Leasing  
Best Rates**

**New Faster MACS at Unbelievable Deals!**

e-mail:cmsales@cmpumall.com

## PowerMacs

**G3/300**

128MB/2x4GB, 24xCD

**8600/300**

32-4GB, 24xCD, Zip

**\$3795**

**\$1795**

G3/300 Tower 64/4GB-24xCD	\$2990
G3/266 Tower 128/4GB, 24xCD	\$2895
G3/266 Tower 32/6GB, 24xCD, Zip	\$1995
G3/266 Desktop 32/4GB, 24xCD, Zip	\$1675
G3/233 MT. 32/4GB, 24xCD, 56K	\$1675
G3/233 DT. 32/4GB, 24xCD, Kb.	\$1395
9600/350 64/4GB, 24xCD, Zip	\$2545
9600/300 64/4GB, 24xCD, Zip	\$2145
9600/200MP Dual Proc. 32-4GB, 12xCD	\$1795
7300/180 16/2GB, 12xCD	\$1195
4400/200 32/2GB, 12xCD, 256K	\$895

## Apple

### PowerBooks

**3400c/240 MHz**

16/3GB, CD **\$2395**

**3400c/200 MHz**

16/2GB, CD **\$2095**

**2400c/180 MHz**

16/1.3GB **\$1595**

**1400c/166 MHz**

16/2GB, CD **\$1595**

**3400C Battery \$89**

## G3 PowerBooks

G3/292 64/8GB, 20xCD, 56K	\$4985
G3/250 32-5GB, 20xCD, 33.6	\$3555
G3/250 32-4GB, 20xCD, 56K	\$3645
G3/233 32-2GB, CD, 56K, 14.1" T	\$3145
G3/233 32-2GB, CD, 13.3" TFT	\$2795
G3/233 32-2GB, CD, 56K, 13.3" T	\$2385
G3/233 32-2GB, CD, 12.1" DSTN	\$2175



### Fax/Modem

Teleport 56K External	\$145
Powerport 14.4 PCMCIA	\$39
56K PCMCIA	\$165
US Robotics 56K V.90 FOR MAC	\$159

3400c/240 48/3GB, CD, 10BT, 56K	\$2695	1400cs/166 16/1.3GB, 8xCD	\$1495	DUO 2300C 40/1.1GB	\$1095
3400c/200 48/2GB, CD, 10BT, 56K	\$2345	5300cs/100*16/500MB, 14.4mdm.	\$795*	DUO 2300C* 8/750MB	\$895
2400c/180 32/2GB, Floppy	\$1795	5300cs/100*16/750MB, 14.4mdm.	\$877*	Floppy+Adpt.	\$189

## Displays

APPLE 1705/1710*	\$445/445*
ColorSync 17"	\$765
ColorSync 20"	\$1749
850 20"	\$1299
850AV 20"	\$1349



**LACIE**

19" Color Display **\$769**

.22dpi, 75MHz, 1600x1200

21" Color Display **\$1189**

.28dpi, 75MHz, 1600x1200

**3 Year Manufacturer Warranty**



**SONY**

ViewSonic



100ES 15" 0.25 dpi	\$299	0.27dpi W/Sound	
200ES 17" 0.25 dpi	\$499	17EA 17"	\$469
200GS 17" 0.25 dpi	\$565	G810 21"	\$949
20SEII 20" 0.25 dpi	\$1145	P810 21"	\$1099

## SOFTWARE

Adobe Photoshop 4.0.1	\$399
Adobe Illustrator 7.0	\$269
Adobe PageMaker 6.5	\$335

Macromedia Freehand 8 **\$279**

MetaCreations Painter 5.0	\$239
Expression	\$179
Detailer	\$179
Bryce 3D	\$149

QuarkXpress 4.0	\$695
Connectix Virtual PC	\$135
Insignia SoftWindows 95 Ver. 5.0	\$177
MS Office 98 for MAC	\$299
MS Word 98/ Excel 98	\$169/179
Symantec Norton Utilities 3.5	\$95



## Digital Cameras



Agfa ePhoto 307	\$305
Agfa ePhoto 780	\$489
Agfa ePhoto 1280	\$795
CASIO QV-300	\$629
EPSON PhotoPC550	\$299
Kodak DC50	\$449
Kodak DC-210(\$100 Rebate)	\$699
Olympus D600-L	\$1189
SONY Mavica FD5	\$469
SONY Mavica FD7	\$649

## TOSHIBA

**PDR-2**

**\$119**

**iX MICRO**

### Video Cards

ix3D Ultimate/ Pro	\$589/329
ix3D Mac Rocket	\$249
Turbo TV MAC & PC	\$89
TwinTurbo 128M4/M8	\$259/399

**Simms & Dimms  
Best prices!**

with Toast  
Software

### CD Recordable

4x8 CD-R for MAC & PC	\$469
2x4x6 CD-RW for MAC & PC	\$589

**1-800-977-5665  
www.computerstogo.com**

## Printers

APPLE Clr. LaserWriter 12/660 PS *	\$1995
Clr. LaserWriter 12/660 PS	\$3695
" 16/600 PS 16ppm, 8MB, Ethernet	\$1095
" 12/640 PS 12ppm, 8MB, Ethernet	\$999
StyleWriter 4100/4500	\$239/339



**HEWLETT\*  
PACKARD**

LaserJet 5000N 16ppm, 1200dpi, 11x17", Ethr.	\$1849
LaserJet 4000N/TN 17ppm	\$1349/1465
LaserJet 4MV/8000N 11x17", PS L2	\$1775/2645
LaserJet 5M/ 5MP*/ 6MP*	\$1285/ 495/ 735
DeskJet 1600CM/3400CM portable	\$1445/295
LaserJet 6MP 8ppm, 3MB, 600DPI, PSL2	\$785

**EPSON**

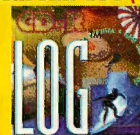
**Stylus Color Printers**

**600/800/3000 Mac & PC \$220/325/1595**

**XEROX**

**Laser  
Printers**

DocuPrint 4512N 12ppm, 600dpi, Ethr.	\$1075
DocuPrint 4517MP5 17ppm, 1200dpi, Ethr.	\$1285
DocuPrint N32 32ppm, 600dpi, Ethr.	\$2525
DocuPrint C55 (Free Scanner with purchase)	\$2650



**CDR Media  
74Min., 650MB**

Qty. 100+ Spindle	\$1.09
Qty. 100 Jewel Case	\$1.29
CD-Rewritable	\$15



Zip Plus / Jazz II	\$179/569
Zip scsi / Jaz scsi	\$137/279
10-Pk ZIP / 3-Pk JAZ Cart.	\$95/235



# CALL THE MAC EXPERTS!

Your one-stop source for everything Macintosh. Complete solutions and expert advice our specialty!  
Call for the absolute lowest prices and immediate delivery on over 20,000 Mac products!

## Us

- Our salespeople are some of the most knowledgeable in the business. They're not order takers and they don't push for a one time sale. After all, over half our business comes from repeat and referred customers!
- We have 800 line tech support for as long as you own your computer!
- We load over 160 megabytes of useful software on every computer.
- Every Mac system is thoroughly bench tested, and then personally verified and approved by your specific consultant.
- We will customize your computer any way you need, and always with an exact description as to what we're including.
- We give you a free mouse pad with every system.
- We have no voice mail—there's always a human being on the other end of the line—for tech, sales and management.
- We answer the phone: "how can we help you?" not "may I take your order?"
- We live in Oregon, where there is no sales tax and the people are friendly and polite!
- Even customized systems usually ship within 24-48 hours.
- Government and corporate purchase orders normally approved the same day.
- We take trade-ins, and we sell every style of quality Macintosh possible.
- We have competitive prices on over 20,000 Macintosh items.
- All we do is Macintosh—our company is run entirely on Macs.

## Them

- They sell you a box.
- If you have a problem, they tell you to call the manufacturer. And then you get to wait on hold for a long, long time.

## You

- Potentially one of the most important people in the world: our customer.

## PowerMax Trinitron™ Monitors

Model PM15T 25 mm dot pitch—up to 1280x1024 .....	\$349
Model PM17T 25 mm dot pitch—up to 1280x1024 .....	\$549
Model PM17TE+ 25 mm dot pitch—up to 1600x1280 .....	\$699
Model PM20T 30 mm dot pitch—up to 1600x1280 .....	\$1149
Model PM20T+ 25 mm dot pitch! .....	\$1399

PowerMax Trinitron™ monitors are designed specifically for the rigorous demands of the Macintosh. They ship complete with Mac-ready cables and adapters, a three year warranty, and our satisfaction guarantee: if the monitor is not just right, we'll replace it for you!

## MacUser Labs

## Reviews:

"Four Mice! A Power-Max Power Play" and "Not only do the PowerMax monitors display good-looking images, but (they) are affordably priced!" and "Nice price, nice image quality, nice controls — nice monitor!"

# POWER MAX

Knowledge is Power

**Toll Free tech support for as long as you own your computer!**

Save on these complete packages!



604 Power!

Pictures may not match monitor in package

### Package G3A987

PowerMac G3 233 desktop, 48 mb RAM, 4 Gb Drive, 24x CD, 15" Color Display, deluxe APC surge protector, MS Office 4.21.

Only \$1899, or just \$78 per month!

Complete G3!

### Package SMA987

Factory Refurbished Motorola StarMax 604e 200MHz w/32 Mb RAM, 1.2 gig drive, 15" color display. Only \$1099, or just \$44 per month!\*

Free Photoshop! Premiere LE CD with every Package!



240 MHz!

### Package PBA987

Factory Refurbished PowerBase 240 with 24 Mb of RAM, 2 Gig hard drive, 12x CD Rom, 15" Color Monitor, Dabblor 2 Software. All this for only \$1099, or just \$44 per month!\*

\*Only while supplies last

### Package S9A987

SuperMac S900 w/ 250MHz G3, 80 Mb RAM, 4 gig drive, 24x CD, 17" color display, an internal 1 Gb Jaz drive and MS Office 4.21! Only \$2999, or just \$121 per month!

6 Slot G3!

PowerMac G3 Tower: 300 MHz w/96 Mb RAM, 4 gig drive, 24x CD, internal Zip drive, 17" color display, Microsoft Office 4.2.1 CD, deluxe APC surge protector. Only \$3788, or just \$144 per month!

G3 300!

## POWERMAX HARD DRIVE BLOWOUT!

You won't find better prices on complete external subsystems of this quality! Also call for a quote on our super-fast custom arrays!

	Internal	External
Two Gigabyte 7200 .....	\$199	\$268
Four Gigabyte 5400 .....	\$239	\$298
Four Gigabyte 7200 .....	\$299	\$398
Nine Gigabyte 10000 .....	\$999	\$1088
1Gb Jaz Drive w/cart .....	\$269	\$289
2Gb Jaz Drive w/cart .....	\$499	\$588

Prices only while supplies last!



We'll take your Macintosh computer in trade toward the purchase of any product we sell! Call one of our expert Mac consultants for complete details! Or accelerate your Mac with one of our many upgrades!

MacPowr G3 220MHz w/512 Cache/110 .....	\$649	200 MHz Upgrade
MacPowr G3 250MHz w/512 Cache/125 .....	\$749	Boards- only \$219!
MacPowr G3 275MHz w/1 Mb Cache/183 .....	\$1199	225 MHz Upgrade
MacPowr G3 300MHz w/1 Mb Cache/150 .....	\$1549	Boards- only \$269!

**newer technology**

**Trade Up**  
with **PowerMax!**

## We'll save you hundreds on our trade-in units w/warranty!

Customizable PowerPC Systems		Customizable G3 Systems	
8600/300 32 Ram/24x Zip .....	\$1649	G3 Desktop 233 32/24x CD .....	\$1499
9600/200MP 32 Ram/12x .....	\$1849	G3 Tower 233 32/24x/56k .....	\$1788
9600/300 64 Ram/24x Zip .....	\$2228	G3 Desktop 266 32/24x CD/Zip .....	\$1788
9600/350 64 Ram/24x Zip .....	\$2688	G3 Tower 266 32/24x/Zip .....	\$2199
1400C/133 16/1.3 Gb/CD .....	\$1629	G3 Tower 300 64/24x .....	\$3149
1400C/166 16/2 Gb/CD .....	\$1899	G3 DT 233 32/4000/24x CD .....	\$1599
Wallstreet G3 233 32/2 Gb/Floppy/Eth .....	\$2549	G3 Tower 233 32/4000/24x/56k .....	\$1888
Wallstreet G3 233 Active .....	\$2899	G3 DT 266 32/4000/24x CD/Zip .....	\$1888
3400C/240 16/3 Gb/12x CD .....	\$3599	G3 Tower 266 32/6000/24x/Zip .....	\$2349
Wallstreet G3 250 Active/Modem .....	\$3788	G3 Tower 300 64/4000/24x .....	\$3249
G3 250 32/5 Gb/20x .....	\$4588	G3 Tower 266 128/4000/Ether .....	\$3549
New Ready-Made Mac Systems		Pre-Packaged G3 Systems	
7200/120 16/1.2/8x CD .....	\$849	G3 DT 233 32/4000/24x CD .....	\$1599
6400/200 16/1.6/8x CD .....	\$929	G3 Tower 233 32/4000/24x/56k .....	\$1888
6400/200 Avid Video Editing .....	\$1049	G3 DT 266 32/4000/24x CD/Zip .....	\$1888
7300/180 16 Ram/2 Gb/12x CD .....	\$1399	G3 Tower 266 32/6000/24x/Zip .....	\$2349
6500/300 64/4000/12x CD .....	\$1449	G3 Tower 300 64/4000/24x .....	\$3249
PowerMac 7300/180 Pentium .....	\$1749	G3 Tower 266 128/4000/Ether .....	\$3549
Factory Refurbished w/warranty!		Powerbooks- Your complete source!	
6100/66 16/500/CD w/Dos .....	\$529	5300CS 8/750 .....	\$849
6230/75 16/Gig/CD .....	\$625		
6300/100 16/1.2/CD .....	\$649		
PowerBase 200 16/2 Gb/CD .....			
PowerBase 200 16/2 Gb Twr .....	\$829		
PowerBase 240 16/2 Gb/CD .....	\$829		
5200/75 8/500/CD w/15" .....	\$849		
6400/180 16/1.6/CD .....	\$849		
StarMax 4000/200 16/1.2/CD .....	\$849		
6400/200 16/2.4/CD .....	\$949		
6500/225 32/3 Gb/12x/33.6 .....	\$999		
6400/200 32/2.4/CD/Avid Video! .....	\$1039		
7600/132 16/1.2/CD .....	\$1049		
6500/250 32/4 Gb/Zip .....	\$1049		
6500/250 32/3 Gb/Eth/Video .....	\$1088		
7300/180 16/2 Gb/CD .....	\$1199		
9500/180MP 32/2 Gb/CD .....	\$1399		
8600/250 32/4 Gb/CD/Zip .....	\$1549		
PowerCenter Pro 240 64/2 Gb .....	\$1599		
PowerTower Pro 225 64/2 Gb .....	\$1799		
Workgroup Server Romp!			
7250 16/2 Gb Internet .....	\$888		

All SuperMac models in stock at blowout prices!

# 800-441-6977

Local line: (503) 624-1827 • Fax (503) 624-1635  
http://www.powermax.com • email: powermax@europa.com

Prices subject to change without notice. Prices reflect cash discount. Credit card orders strictly verified against fraudulent use. With use of credit card as payment customer acknowledges that some products are subject to final sale.

We accept educational and corporate purchase orders, and are experts in financing for virtually any size business!







## 20" SONY COLOR MONITOR -GDM 1960

# ONLY \$549!

14" - \$125! **NEXT DAY**  
 17" - \$299! **DELIVERY**  
 19" - \$499! **AVAILABLE**

CALL FOR DETAILS 800-390-7020  
 181 Salem Street Malden, MA 02148



New, Factory Surplus, Discontinued and Reconditioned Computers, Laptops, Printers and Peripherals

## The Right Computer For The Right Price!

Centris - Quadra - Powermac  
 Powerbook - Mac II - Laserwriter  
 Monitors - Mac clones - Parts  
 Accessories



# COMPUTER DISCOUNTERS

Your Total Hardware Source

COMPUTER DISCOUNTERS sets the standard for sales and customer support. An outside professional sales staff is available for our corporate as well as small business clients. A knowledgeable staff of retail customer service professionals are eager to help you at either of our retail showrooms.

10543 Ewing Rd., Beltsville, MD **800-964-1886**  
<http://www.computerdiscounters.com>



## REUNION

- Sound & video
- Web publishing
- New charts
- Unlimited people
- Unlimited facts and events
- Unlimited sources
- Unlimited chart size
- Hebrew date conversion

Full demo at [www.LeisterPro.com](http://www.LeisterPro.com)  
 To order, call  
**MacConnection 1-800-334-4444**


## "Spectacular"

MacWorld 1/98

### Reunion 5 BETTER THAN EVER!


The most comprehensive family tree software available. Create large, beautiful pedigree and descendant charts - plus, new for Reunion 5, relative and timeline charts. Play sounds & watch videos. Print mailing lists, birthday and anniversary calendars, and book reports - they're great for family reunions. Reunion makes it easy to share your family information on the internet, with automatic HTML reports and "Web Family Cards" with pictures.

Reunion is easy to use, fast, fun and made for the Macintosh.



## Leister Productions

PO Box 289, Mechanicsburg, PA 17055  
 phone 717-697-1378 fax 717-697-4373  
 e-mail: [info@LeisterPro.com](mailto:info@LeisterPro.com) • web site: [www.LeisterPro.com](http://www.LeisterPro.com)



the BEST of EVERYTHING  
 \*\*\*\*\*  
 Computer Life



## MEMORY

Serving Computer Industry Since 1981

We Will Beat any Advertised Price on Name Brand Memories in this Magazine.

SDRAM for G3		POWERBOOK G3	
32/64MB	\$52/119	32/48MB	\$110/142
128MB	\$215	64/128MB	\$169/259
4MB VRAM	\$42	◆ POWERBOOK 3400	
168 PIN EDO/FPM DIMM		16/32MB	\$69/110
16/32MB	\$30/52	64/128MB	\$169/279
64MB	\$105	◆ POWERBOOK 1400	
1MB VRAM	\$19	16/32/48MB	\$60/92/145
3.3V EDO DIMM	CALL	◆ POWERBOOK 5300, & 190	
72/30 PIN SIMM		48MB (for 5300)	\$149
8/16MB 72 Pin	\$16/25	16/32MB	\$59/95
32MB 72 Pin	\$48	PB. 500 & DUO Series Call	
4/16MB 30 Pin	\$12/42	We Also Sell PowerBook Battery & Hard Drive.	
Cache & VRAM			
In Stock Excellent Deals			

Academic Institutions, Government & Qualified Firms P.O.'s. Accepted.

24 Hours Online Order ➔ [www.eritech.com](http://www.eritech.com)  
**eritech** CALL Toll Free 1-888-808-6242  
 INTERNATIONAL, INC. Phone: (818) 244-6242 FAX: (818) 500-7699  
 4551 San Fernando Rd., Suite 110, Glendale, CA 91204 e-mail: [eritech@sprynet.com](mailto:eritech@sprynet.com)  
 Prices are Subject to Change without Notice!

### Quadra 650 Package (U)

Packaged with: 20" Color Monitor Ext. Kybd & Mouse

# \$599

### Macintosh Ready 24X CDROM

# \$99

Includes Cables & InTech SW

### 56K Bullet Modem (N)

DATA/FAX VOICE

# \$119

### Mac OS 8.1 CD (N)

complete upgrade

# \$49.99

### Mac IISI Package (U)

9/80 14" Color Mtr, Ext Kybd,

# \$199

### Mac IICI Package (U)

8/80 13" Color Mtr, Ext Kybd,

# \$199

### Centris 650 16/240/CD (U)

16/240/CD 14" Color Mtr, Ext Kybd,

# \$399

### PowerMAC 6100-60 16/240 (U)

Power PC 601-60 Mhz Upgradable to G3

# \$499

### PowerMAC 7100-66 16/240 (U)

Power PC 601-60 Mhz Upgradable to G3

# \$599

### Mac Performa 5200 (R)

603-75 Mhz 16/500/4x with E-NET

# \$889

### PowerMAC 5400-180 (R)

603e-180 16/1.6/8x 28.8bps

# \$1099

### Macintosh PowerBook 180 (U)

68030-33 Mhz 14 Ram 120 HD ACTIVE MATRIX

# \$399

32x Toshiba Ext. CDROM	159.00	17" Apple 1700AV Mtr (R)	449.00
2x Apple CD ROM (P)	49.00	Apple 17" MultiScan (U)	399.00
500 MB Apple SCSI Drive (P)	129.00	Apple 20" Two Page Display (U)	99.00
240 MB Apple SCSI Drive (P)	79.00	Apple 15" MultiScan Mtr (U)	229.00
80 MB Apple SCSI Drive (P)	49.00	Apple 14" Color Plus Mtr (U)	179.00
Ethernet Cards PDS/NUBus/PCI/SE	55.00	Apple 14" RGB Trinitron Mtr (U)	189.00
Mac IISI 1/0	79.00	Apple 13" RGB Trinitron Mtr (U)	159.00
Mac LC 4/40	99.00	Apple Extended Keyboard (U)	29.00
LC II 4/40	169.00	Apple Mouse, Mac ADB (N)	19.99
Mac IICx 0/0	69.00	Classic 4/40	129.00
Mac SE 4/120	99.00	Apple LaserWriter IInt (U)	199.00
Mac IICI 0/0	99.00	Apple LaserWriter IInt (U)	199.00
IICI 32k cache	19.00	TONER • IN STOCK •	CALL
C650 8/0	199.00		

PowerON computer services • 4323 Anthony Ct. #1 • Rocklin, CA 95677

JOIN E-Mail Mailing List **800-673-6227**  
**www.poweron.net**  
 All Sales Final • All Prices include 3% cash price. Prices subject to change without notice. (916) 652-1880 • (916) 652-1881 FAX Mon-Sat. 10a-5p PST



# ADVERTISER INDEX

ADVERTISER	PAGE NO.	PHONE NO.	WEB ADDRESS
Access Software	51	800-800-4880	www.accesssoftware.com
AMC - Advanced Multimedia Concepts	86	(425) 558-3101	www.mam.amc-direct.com
Aladdin Systems	53	415-761-6200	www.aladdinsys.com
Apple Computer		800-500-4862 #100	www.apple.com
ARS Nova	91	800-445-4866	www.ars-nova.com
Awhen	95	888-89-AWHEN	www.awhen.com
Bungie Software	OBC	800-295-0600	www.bungie.com
ClubMac	76-77	800-258-2622	www.club-mac.com
Coast to Coast Memory	95	800-4-Memory	http://18004memory
Compu America	78-79	800-533-9005	www.compu-america.com
Compu. D	85	800-929-9333	www.compu-d.com
Compu Mall	87	800-977-5665	www.computerstogo.com
Computer Discounters	94	800-964-1882	www.computerdiscounters.w1.com
The Computer Exchange	95	800-304-4639	www.compexch.com
MacMall	74-75	1-800-965-3282	www.macmall.com
Deneba Software	13	800-6-CANVAS	www.deneba.com
DFI	94	800-390-7020	-
Digitek	91	888-699-8787	www.macstuff.net
DriveSavers	95	800-440-1904	www.drivesavers.com
Earthlink	5	800-395-8425	www.earthlink.net
Eritech International, Inc.	94	800-808-6242	www.eritech.com
Fox Interactive	20-21	310-369-7000	www.foxinteractive.com
FWB Software	27	650-482-4800	www.fwb.com
Impulse, Inc.	92	612-425-0557	www.coolfun.com
Infinity Micro	92	800-589-1234	www.infinity-micro.com
InterLand Inc.	IBC	800-599-0546	www.interland.net
LA Computer Center	84-85	800-689-3933	www.lacc.com
Leister Productions	94	717-697-1378	www.leisterpro.com
MacNet	89	800-404-9976	www.applemacnet.com
Mac Power Sales & Service	95	888-275-POWER	www.mac-power.com
Mac Solutions	93	800-873-3RAM	www.macsolutions.com
Mac Sales	95	1-888-MAC-SALES (622-7253)	www.macs4sale.com
MacSoft (a GT Interactive Company)	55	800-229-2714	www.wizworks.com/macsoft
MacSoft (a GT Interactive Company)	59	800-229-2714	www.wizworks.com/macsoft
Mactica	89	888-666-5147	sales@mactica.com
MacZone	80-81	800-304-0286	www.maczone.com
MediaGuide	93	800-463-0686	www.mediaguide.com
MicroMat Computer Services	57	800-829-6227	www.micromat.com
MITSUBISHI ELECTRONICS AMERICA, INC.	7	800-843-2515	http://www.mitsubishi-display.com
Newer Technology	IFC-1	316-943-0222	www.newertech.com
Olympus America	10-11	1-800-6CAMERA	www.olympus.com/digital
Ontrac Data	95	(760) 864-9535	www.ontracdata.com
Orange Micro, Inc.	15	800-615-3183	www.info@mph.com
Other World Computing	82-83	800-275-4576	www.macsales.com
Power Max	88	800-441-6922	www.powermax.com
PowerOn	94	800-673-6227	www.poweron.net
REAL Software	91	512-292-9988	www.realsoftware.com
Software Architects	2	425-487-0122	www.softarch.com
Totally Hip Software	48	888-8THEHIP	www.totallyhip.com
Village Tronic	65	++49 5066 7013 30	www.villagetronic.com

Reach more than 150,000  
Mac Addicts!

Over 72% of our readers bought a product/  
service as a result of reading MacAddict.  
Be sure they see your sales message - -  
call today to reserve your space!

**Mac**  
**ADDICT**

**imagine**  
a new way of publishing

MacAddict  
150 North Hill Dr., #40  
Brisbane, CA 94005

TEL: 415-468-4684  
FAX: 415-468-4686  
http://www.macaddict.com

## ADVERTISING REPRESENTATIVES



**André Lengyel, ext. 416**  
National Ad Manager  
e-mail: alengyel@macaddict.com  
East Coast U.S., North Central  
U.S. and Eastern Canada

**Don Kimenker, ext. 754**  
Regional Ad Manager  
e-mail: don@macaddict.com  
Bay Area, Northwest,  
and Western Canada

**Kevin White, ext. 497**  
Regional Ad Manager  
e-mail: kwhite@macaddict.com  
Southwest and  
South Central U.S.

**Jana Massey, ext. 194**  
Ad Coordinator  
e-mail: jmassey@macaddict.com  
**MACADDICT NETWORK**  
**Camilla Colegrave, ext. 121**  
Online Advertising Manager,  
e-mail: ccolegrave@macaddict.com



Create **REAL** applications with one finger...



Use the others for something else.

**REALbasic™**

Visit [www.realbasic.com](http://www.realbasic.com) for a FREE DEMO

REALbasic is a trademark of REAL Software, Inc.

Great for Novice or Expert programmers

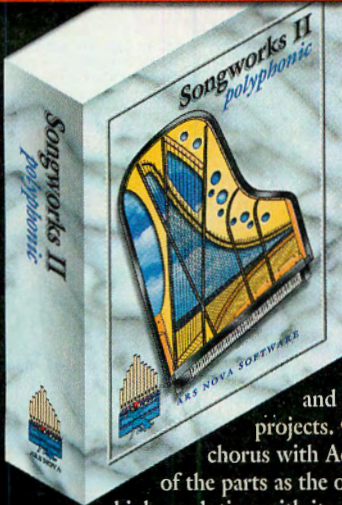
Build your interface visually in minutes

Powerful, yet simple BASIC programming language

Modern Object-Oriented design

## NEW! Songworks II *polyphonic*

Music Composition & Exploration!



Write any kind of music, from songs to symphonies.

- Let Songworks II suggest harmony or tune ideas!
- Can notate music you play, via MIDI or even letter keys.
- MIDI is not required—compose or listen even on a laptop.
- Exports sound files and PICTs for multimedia projects.

- Learn your part in a chorus with Active Listening™ (tap one of the parts as the others play!)
- Prints in high resolution with its own True-Type music font.
- Outputs Mac 16-bit sound, QuickTime instruments, or MIDI.
- Something to do with all that power in your PowerMac.
- Imports/Exports MIDI files, too. SRP \$125.

ARS NOVA • [www.ars-nova.com](http://www.ars-nova.com) • 800-445-4866

Get Lowest Prices  
& Great Service  
...here

**www.macstuff.net**

Best Prices on G3 CPUs!

Displays • Printers •  
Hard Drives • Memory •  
Upgrades • Scanners

Call today or check our  
web site for on-line  
price check and  
ordering!



**DIGITEK** Inc., Computer Sales & Internet Services  
[www.macstuff.net](http://www.macstuff.net) or call 888/699-8787

Rockford Trust Bldg., 7th Floor  
202 West State Street, Rockford, IL 61101  
Int'l/local 815/969-8000 • fax 815/969-8760  
sales@macstuff.net • Go Digitek@aol.com





# SHOPPERS PARADISE

## "Custom Configuration Specialists"

- Dealers & International sales welcome!
- Govt., University & Corporate P.O.'s Welcome.
- Best Prices, Service & Delivery.

### POWERMACS PERFORMA

G3/233DT 32/4GB/24XCD/KB	1479	5200/75 8/800/CD*	795.
G3/233MT 32/4GB/24XCD/56K/KB	1729	5260/100 16/800/CD*	895.
G3/266DT 32/4GB/24XCD/ZIP	1729	5300/120 16/16IG*	949.
G3/266MT 32/6GB/24XCD/ZIP/AV	2189	5400/180 16/1.2/CD*	995.
G3/266MT 128/4GB/24XCD/8MB	3279	6400DS 12/500/CD*	595.
G3/300MT 64/4GB/24XCD/6MB	2979	6116/66 8/700/CD*	595.
G3/300MT 128/2-4GB/24X/8MB	4095	6200/75 8/1GB/CD*	595.
9600/350 64/4GB/24XCD/Zip	2779	6300/100 16/1.2/CD*	CALL
9600/300 64/4GB/16xCD/Zip	2295	6360/160 16/1.2/CD*	595.
9600/233 32/4GB/12XCD	1795	6400/180 32/2GB/CD*	795.
9600/200MP 32/4GB/12XCD	2195	6400/200 16/2.4/CD*	895.
8600/300 32/4GB/12xCD/Zip	1795	6400/200VE 16/2.4/CD*	895.
8600/250 32/4GB/CD/ZIP	1495		
8600/200 32/2GB/12xCD	1395		
7600/132 16/1GB/8xCD*	995		
7300/200 32/2GB/24XCD/ZIP	1295		
7300/180 16/2GB/CD/KB	995		
7300/180 16/2GB/CD/DOS	1875		
7100/80 8/500	495		
6500/300 32/4GB/12XCD	1149		
6500/300 32/4GB/12X/33.6/AVID	1349		
6500/225 32/4GB/24XCD/56K	929		
6500/225 32/3GB/CD/3F/KB	849		
4400/200 32/2GB/CD/DOS	995		
WGS G3/233 64/4GB/24X/SHARE	3095		
WGS G3/266 128/2-4GB/24X/SH	4295		
WGS 9650/233 64/4GB/CD/SH	3295		

### PRINTERS

LaserWriter 4/600	
LaserWriter 12/640	
LaserWriter 16/600	
LaserWriter Color 12/600	
LaserWriter 8500	

**Magnavox**  
20" \$395.

\*Prices are cash discounted & subject to change w/o notice. \*Visa, MC, Amex, Govt., university & corporate P.O.'s welcome. \*factory reconditioned units.

## Infinity Micro

800 • 589 • 1234

### POWERBOOKS

G3/250 32/5GB/20XCD/56K	3695
G3/233 32/4GB/20XCD/14.1"	3295
G3/233 32/2GB/20XCD/13.3"	2795
G3/233 32/2GB/20X/56K/12.1"	2495
G3/233 32/2GB/20X/12.1"	2275
G3/292 64/8GB/20X/56K/14.1"	5295
3400C/240 16/3GB/12XCD	2595
3400C/200 16/2GB/12xCD	2495
3400C/180 16/1.3GB/8XCD	2095
1400C/166 16/2GB/8XCD	1795
1400CS/166 16/2GB/8XCD	1495
5300C 16/1GB/16/750	1049/945
5300CS 8/750/16/750	779/795
2300C 20/1GB/14.4"	1095
2400C/180 16/1.3GB	1545
5400C/32/500/19.2MDM	895
180 14/120/14.4 Fax*	595
Apple Duo Dock II	195
PowerPort Mercury 19.2	49
PowerBook carrying case	Free w. order

### NEWER TECHNOLOGY

UPGRADE FOR POWERMAC G100 SERIES	
MaxPower G3 210MHz 750 512K/105	449
MaxPower G3 240MHz 750 1MB/160	639
UPGRADE FOR POWERMAC 7100/8100	
MaxPower G3 210MHz 750 512K/105	549
MaxPower G3 240MHz 750 1MB/160	729
UPGRADE + 733/750/775/895/9600 SERIES	
MaxPower G3 220MHz 750 512K/110	599
MaxPower G3 250MHz 750 512K/125	729
MaxPower G3 266MHz 750 1MB/133	949
MaxPower G3 275MHz 750 1MB/183	1149
UPGRADE FOR POWERBOOK 1400/2400	
NUPower G3 216MHz 750 512K/108	649
NUPower G3 250MHz 750 1MB/125	899
NUPower G3 240MHz 750 512K/120	789

### HEWLETT PACKARD

LaserJet 5MP	595
LaserJet 6MP	819
DeskJet 8900ci	389
DeskJet 1600CM	1395
LaserJet 4000N	1089/1395
LaserJet 4000TN	1529
LaserJet 4Mv	1995
LaserJet 5000	1395
LaserJet 5000N	1995
LaserJet 5000GN	2495

### GCC TECHNOLOGIES

Elite XL-1212	1289
Elite XL-608	1489
Elite XL-616	1949
Elite XL-808	2249
Elite XL-1208	2779
Elite XL-1208 Platemaker	3699

### EPSON

Epson Stylus 600	249
Epson Stylus 800	289
Epson Stylus 1520	729
Epson Stylus 3000 Color	1629
Epson Stylus Pro-XL 11x17	329

### FARGO ELECTRONICS

Primera Pro	1249.
Pictura 310 Ethernet	3895.

### GLOBAL VILLAGE

TELEPORT 56K FLEX	149
TELEPORT 56K X2	139
POWERPORT 56K PCMCIA	179
POWERPORT 56K ETHERNET	279
POWERPORT MERCURY/500	49

### AGFA

SnapScan 310/600	179/339
SnapScan 600-ART LINE	339
Arcuss II Solo	1289
Arcuss II W. Full Photoshop	1395

### EPSON

Epson Exp. 636 Executive	735
Epson Exp. 636 Artist 600dpi	895
Epson Exp. 636 Professional	1285

### MICROTEK

Microtek Scanmaker E3	199
Microtek ScanMaker E6 STD	479
Microtek ScanMaker E6 Pro	585
Microtek ScanMaker III	1375
Microtek ScanMaker 35T Plus	729
Microtek ScanMaker Internet	549

### UMAX

Umax Astra 610s 300dpi	159
Umax Astra 1200s 600dpi/Pdelx	375
Umax Astra 1200s 600dpi/Pshop	445
Umax PowerLook II/2000	1195
Umax PowerLook III	3395

### SONY

100ES/100GS	349/379
200ES/200GS	629/689
200PS/400PS	845/1195
300SF/500PS	1145/1145

### NEC

E700 17"	619
E1100 21"	999
PT150 21"	1079

### GE 4 YEAR ON-SITE WARRANTY FOR ANY PRODUCT.

\$ 701.16 to \$ 1200	\$1201. To \$ 2000	\$2001 To \$ 3000	\$3001 To \$ 4000	\$4001 To \$ 6000
<b>\$135.95</b>	<b>165.95</b>	<b>189.95</b>	<b>\$219.95</b>	<b>\$249.95</b>

Toll free: (800) 589-1234  
Int. (310) 470-9426 Fax: (310) 470-4956  
2289 Westwood Blvd., Los Angeles, CA. 90064  
[www.infinity-micro.com](http://www.infinity-micro.com)  
Largest & Most Complete Mail order Source!

### Seagate

Cheetah 4.3GB Ultra SCSI AV	68
Cheetah 4.3GB Ultra SCSI AV	77
ST34371N 4.3GB Ultra W. Scsi	46
ST34371W 4.3GB Ultra W. Scsi	48
Cheetah 9.1GB Ultra SCSI AV	109
Cheetah 9.1GB Ultra W. Scsi AV	118

### SOFTWARE

Adobe Photoshop version 4.0	26
Adobe Illustrator version 7.0	27
Adobe Pagemaker vers. 6.5	27
Adobe After Effects	119
Quark Express package	64
Microsoft Office package	25

### RASTEROPS

MC 620 17"	43
MC 6315 17"	58
MC 7515 19"	79
MC 801 21"	109
MC 801HR 21"	124
Rasterops 20" Black & white.	19

### radius

PressView 21SR w. Calibrator	299
ColorMatch Daylight	22

### TRUEVISION

Targa 2000 Pro New	329
Targa 2000 Pro Upgrade*	275

### TEKTRONIX

PHASER 480X	1399
PHASER 550 COLOR LASER	3899
PHASER 600 WIDE	1189

# www.macaddict.com

## Get Addicted

- Links to other key Mac sources
- News and information
- Chat forums
- Contest

imagine  
a new way of publishing



**Mac**  
**ADDICT**  
A better machine. A better Web site.

## Mac ADDICT

Free Issue & CD!

- Arts
- Clubhouse
- Games
- Net
- Tools
- About Us

MacAddict is brought to you by... **imagine**  
a new way of publishing

### What's New

Saturday, December 28: We take a break until January 3, as... Apple buys NeXT! A conference call yields more details. Meanwhile: Apple buys NeXT! We survey the reader reaction. Also: Apple buys NeXT! The top ten site-effects. Quid Pro Quo 1.0 ships, Cyberdog 2.0 goes alpha, and meanwhile, somewhere, Apple buys NeXT!

### This Issue

January 1997: We show you powerful and dangerous ways to customize your Mac, look at QuickTime movie-making and creating cool sounds, and much much more.

### Help!

Our help page answers your questions about the magazine and the disc, lists handy resources for subscribers and provides complete contact information.

### Evangelist

Good stuff from Guy Kawasaki's mailing list for Mac loyalists.

Come see us at Macworld Exposition! Find us at booth 2121, 2121A, 2121B, 2121C, 2121D, 2121E, 2121F, 2121G, 2121H, 2121I, 2121J, 2121K, 2121L, 2121M, 2121N, 2121O, 2121P, 2121Q, 2121R, 2121S, 2121T, 2121U, 2121V, 2121W, 2121X, 2121Y, 2121Z, 2121AA, 2121AB, 2121AC, 2121AD, 2121AE, 2121AF, 2121AG, 2121AH, 2121AI, 2121AJ, 2121AK, 2121AL, 2121AM, 2121AN, 2121AO, 2121AP, 2121AQ, 2121AR, 2121AS, 2121AT, 2121AU, 2121AV, 2121AW, 2121AX, 2121AY, 2121AZ, 2121BA, 2121BB, 2121BC, 2121BD, 2121BE, 2121BF, 2121BG, 2121BH, 2121BI, 2121BJ, 2121BK, 2121BL, 2121BM, 2121BN, 2121BO, 2121BP, 2121BQ, 2121BR, 2121BS, 2121BT, 2121BU, 2121BV, 2121BW, 2121BX, 2121BY, 2121BZ, 2121CA, 2121CB, 2121CC, 2121CD, 2121CE, 2121CF, 2121CG, 2121CH, 2121CI, 2121CJ, 2121CK, 2121CL, 2121CM, 2121CN, 2121CO, 2121CP, 2121CQ, 2121CR, 2121CS, 2121CT, 2121CU, 2121CV, 2121CW, 2121CX, 2121CY, 2121CZ, 2121DA, 2121DB, 2121DC, 2121DD, 2121DE, 2121DF, 2121DG, 2121DH, 2121DI, 2121DJ, 2121DK, 2121DL, 2121DM, 2121DN, 2121DO, 2121DP, 2121DQ, 2121DR, 2121DS, 2121DT, 2121DU, 2121DV, 2121DW, 2121DX, 2121DY, 2121DZ, 2121EA, 2121EB, 2121EC, 2121ED, 2121EE, 2121EF, 2121EG, 2121EH, 2121EI, 2121EJ, 2121EK, 2121EL, 2121EM, 2121EN, 2121EO, 2121EP, 2121EQ, 2121ER, 2121ES, 2121ET, 2121EU, 2121EV, 2121EW, 2121EX, 2121EY, 2121EZ, 2121FA, 2121FB, 2121FC, 2121FD, 2121FE, 2121FF, 2121FG, 2121FH, 2121FI, 2121FJ, 2121FK, 2121FL, 2121FM, 2121FN, 2121FO, 2121FP, 2121FQ, 2121FR, 2121FS, 2121FT, 2121FU, 2121FV, 2121FW, 2121FX, 2121FY, 2121FZ, 2121GA, 2121GB, 2121GC, 2121GD, 2121GE, 2121GF, 2121GG, 2121GH, 2121GI, 2121GJ, 2121GK, 2121GL, 2121GM, 2121GN, 2121GO, 2121GP, 2121GQ, 2121GR, 2121GS, 2121GT, 2121GU, 2121GV, 2121GW, 2121GX, 2121GY, 2121GZ, 2121HA, 2121HB, 2121HC, 2121HD, 2121HE, 2121HF, 2121HG, 2121HH, 2121HI, 2121HJ, 2121HK, 2121HL, 2121HM, 2121HN, 2121HO, 2121HP, 2121HQ, 2121HR, 2121HS, 2121HT, 2121HU, 2121HV, 2121HW, 2121HX, 2121HY, 2121HZ, 2121IA, 2121IB, 2121IC, 2121ID, 2121IE, 2121IF, 2121IG, 2121IH, 2121II, 2121IJ, 2121IK, 2121IL, 2121IM, 2121IN, 2121IO, 2121IP, 2121IQ, 2121IR, 2121IS, 2121IT, 2121IU, 2121IV, 2121IW, 2121IX, 2121IY, 2121IZ, 2121JA, 2121JB, 2121JC, 2121JD, 2121JE, 2121JF, 2121JG, 2121JH, 2121JI, 2121JJ, 2121JK, 2121JL, 2121JM, 2121JN, 2121JO, 2121JP, 2121JQ, 2121JR, 2121JS, 2121JT, 2121JU, 2121JV, 2121JW, 2121JX, 2121JY, 2121JZ, 2121KA, 2121KB, 2121KC, 2121KD, 2121KE, 2121KF, 2121KG, 2121KH, 2121KI, 2121KJ, 2121KK, 2121KL, 2121KM, 2121KN, 2121KO, 2121KP, 2121KQ, 2121KR, 2121KS, 2121KT, 2121KU, 2121KV, 2121KW, 2121KX, 2121KY, 2121KZ, 2121LA, 2121LB, 2121LC, 2121LD, 2121LE, 2121LF, 2121LG, 2121LH, 2121LI, 2121LJ, 2121LK, 2121LL, 2121LM, 2121LN, 2121LO, 2121LP, 2121LQ, 2121LR, 2121LS, 2121LT, 2121LU, 2121LV, 2121LW, 2121LX, 2121LY, 2121LZ, 2121MA, 2121MB, 2121MC, 2121MD, 2121ME, 2121MF, 2121MG, 2121MH, 2121MI, 2121MJ, 2121MK, 2121ML, 2121MM, 2121MN, 2121MO, 2121MP, 2121MQ, 2121MR, 2121MS, 2121MT, 2121MU, 2121MV, 2121MW, 2121MX, 2121MY, 2121MZ, 2121NA, 2121NB, 2121NC, 2121ND, 2121NE, 2121NF, 2121NG, 2121NH, 2121NI, 2121NJ, 2121NK, 2121NL, 2121NM, 2121NN, 2121NO, 2121NP, 2121NQ, 2121NR, 2121NS, 2121NT, 2121NU, 2121NV, 2121NW, 2121NX, 2121NY, 2121NZ, 2121OA, 2121OB, 2121OC, 2121OD, 2121OE, 2121OF, 2121OG, 2121OH, 2121OI, 2121OJ, 2121OK, 2121OL, 2121OM, 2121ON, 2121OO, 2121OP, 2121OQ, 2121OR, 2121OS, 2121OT, 2121OU, 2121OV, 2121OW, 2121OX, 2121OY, 2121OZ, 2121PA, 2121PB, 2121PC, 2121PD, 2121PE, 2121PF, 2121PG, 2121PH, 2121PI, 2121PJ, 2121PK, 2121PL, 2121PM, 2121PN, 2121PO, 2121PP, 2121PQ, 2121PR, 2121PS, 2121PT, 2121PU, 2121PV, 2121PW, 2121PX, 2121PY, 2121PZ, 2121QA, 2121QB, 2121QC, 2121QD, 2121QE, 2121QF, 2121QG, 2121QH, 2121QI, 2121QJ, 2121QK, 2121QL, 2121QM, 2121QN, 2121QO, 2121QP, 2121QQ, 2121QR, 2121QS, 2121QT, 2121QU, 2121QV, 2121QW, 2121QX, 2121QY, 2121QZ, 2121RA, 2121RB, 2121RC, 2121RD, 2121RE, 2121RF, 2121RG, 2121RH, 2121RI, 2121RJ, 2121RK, 2121RL, 2121RM, 2121RN, 2121RO, 2121RP, 2121RQ, 2121RR, 2121RS, 2121RT, 2121RU, 2121RV, 2121RW, 2121RX, 2121RY, 2121RZ, 2121SA, 2121SB, 2121SC, 2121SD, 2121SE, 2121SF, 2121SG, 2121SH, 2121SI, 2121SJ, 2121SK, 2121SL, 2121SM, 2121SN, 2121SO, 2121SP, 2121SQ, 2121



# MEMORY

Lifetime Warranty!

## BEST PRICES!

CALL TODAY!

### SDRAM-In Stock!!

32mb	\$ 47
64mb	\$ 107
128mb	\$ 214
256mb	\$ 680

### 168 Pin DIMMs

16mb	\$ 27
32mb	\$ 48
64mb	\$ 99
128mb	\$ 270

### PowerBook RAM

500	32 mb	\$ 87
5300	32 mb	\$ 87
5300	48 mb	\$ 122
1400	16 mb	\$ 48
1400	24 mb	\$ 67
1400	32 mb	\$ 90
3400	64 mb	\$ 141
3400	128 mb	\$ 267
3500	64 mb	\$ 133
3500	128 mb	\$ 260

### SIMMs 72 & 30 pin

72	16mb/32mb	\$ 23/44
72	64mb	\$ 150
30	4mb/16mb	\$ 11/40

### Cache/VRAM

44/64/65	512k	\$ 50
61/71/81	256k	\$ 10
72/76/85	512k	\$ 65
73/76/85/86	1mb	\$ 165
1 mb	VRAM	\$ 18
4 mb	G3VRAM	\$ 38

### Specials

GV 56k PCMCIA	\$ 190
Iomega Zip Drive	\$ 140
Iomega Zip 10 pk	\$ 120
Iomega Jaz Cart	\$ 85
Quantum 2.1 gb	\$ 210
Quantum 3.2 gb	\$ 240
Quantum 4.3 gb	\$ 280
Quantum 6.4 gb	\$ 390
Qntm Atlas 4.5 gb	\$ 495
6400/200 (used)	\$ 900

## WE BUY, SELL & TRADE MACS!

CALL 800 80-WE-BUY for a quote

11933 Wilshire Boulevard, West Los Angeles, CA 90025 Tel: (310) 966-4444 Fax: (310) 966-4433

University & School P.O.'s Welcome ■ VISA-Discover-MC-AMEX no surcharge

Note: All prices are subject to change. Limited to stock on hand. #501

Order Online at [www.macsolutions.com](http://www.macsolutions.com)

# (800) 873-3RAM



Authorized  
Value-Added  
Reseller

# MAC Solutions

Call free:  
(888) 368-6693

## MediaGuide BUY/SELL/TRADE

Local/Int'l: (303) 571-1900  
Fax: (303) 571-5020  
777 N. Santa Fe Dr.  
Denver, CO 80204

OLDER MACS	POWER MACS	MONITORS
Plus 4/0.....\$49	6100/60 8/500/CD.....\$599	Apple 12" mono.....\$79
20 (800k).....\$59	7100/66 8/500/CD.....\$649	Apple 12" RGB.....\$99
40 (FDHD).....\$119	7100/80 8/500/CD.....\$699	Apple 13" RGB.....\$149
8/80.....\$149	7200/75 8/500/CD.....\$649	Apple 14" Color.....\$179
ic 4/40.....\$119	7200/90 8/500/CD.....\$749	Apple 15" MS.....\$279
ic II 4/80.....\$149	8100/80 16/500/CD.....\$799	Apple 16" RGB.....\$299
4/40.....\$89	8100/100 16/500/CD.....\$899	Apple 17" MS.....\$499
8/80.....\$119	7500/100 16/1gig/CD.....\$999	Apple 20" MS.....\$899
4/40/Video.....\$49	8500/120 16/2gig/CD.....\$1099	
40.....\$99	9500/120 16/1gig/CD.....\$1099	<b>PRINTERS</b>
4/40/Video.....\$99	7300/200 32/2gig/CD.....\$1399	Imagewriter II or LQ.....\$99
80.....\$129	<b>More Power Macs and</b>	Apple Laserwriter.....\$99
180.....\$139	<b>Clones in stock...CALL!</b>	Laserwriter IIint.....\$199
160/Video.....\$179	<b>POWERBOOKS</b>	Laserwriter IIintx.....\$249
<b>68040 MACS</b>	PB 140 4/40/14.4.....\$199	LW IIf / IIg.....\$299/\$399
ra 605 8/230.....\$299	PB 160 8/80/14.4.....\$399	
is 610 16/500.....\$299	PB 165 12/120/14.4.....\$499	<b>PARTS &amp; MISC.</b>
ra 610 16/500.....\$349	PB 170 8/80/14.4.....\$399	1.44mb floppy.....from \$69
ra 630 12/250.....\$349	PB 180 12/120/14.4.....\$549	Apple external HD case.....\$29
is 650 16/500.....\$399	PB Duo's from.....\$199	24x external CD-ROM.....\$179
ra 650 16/500.....\$449	PB 190cs 8/500.....\$749	Apple 2x ext. CD-ROM.....\$79
ra 700 20/500.....\$399	PB 520 12/240/19.2.....\$649	Plaintalk microphone.....\$7
ra 800 16/500.....\$479	PB 520c 12/240/19.2.....\$749	6100 DOS card (new).....\$49
ra 900 20/500.....\$449	PB 540 12/240/19.2.....\$749	610/6100 Power supply.....\$99
ra 950 20/500.....\$499	PB 540c 12/320/19.2.....\$899	256K L2 cache for 6100.....\$10
ra 660AV 16/500.....\$499	5300 8/500.....\$799	Ethernet cards.....from \$29
AV 16/500/CD.....\$649	1400s / 3400s...BEST prices!	

### NDLE SPECIALS:

8/80, 13" RGB, Ext. KB, mouse.....\$269
9/80, 13" RGB, Ext. KB, mouse.....\$229
8/80, 13" RGB, Ext. KB, mouse.....\$229

### 30-pin SIMMs:

1MB.....\$5
2MB.....\$9
4MB.....\$15

### Powerbook 5300c BLOWOUT!

5300c  
24/500  
**\$849**

5300c  
16/750  
**\$849**

Apple Color  
Laserwriter  
12/600...\$1799  
(setup kit included)  
Add 1 year AppleCare  
warranty for only \$399

### Incredible Powerbook Deal

PB Duo 280c  
40/1gig/14.4  
**Only \$699 !!**

Add a Duo Dock  
(with lid upgrade)  
**for only \$99 !!**

Upgrade ANY Duo to a 280c  
for only \$299  
(screen and motherboard replacement)

eMate 300  
BLOWOUT  
**\$499**

Ask us about our  
special 2-year,  
on-site, extended  
warranty...  
from only \$99 !!

### HOT Prices on Powerbook Parts!

1gig 2.5" SCSI hard drive.....\$299	Duo Dock power supply.....\$79 (no exch)
36mb Duo SIMM module.....\$99	Duo Dock lid upgrade.....\$69
Duo AC adaptor.....\$39	Apple 14.4 modem for PB Duo.....\$89
Duo Keyboard.....\$39	Global Village 14.4 modem for PB1xx.....\$39
Duo trackball.....\$39	Global Village 19.2 modem for PB5xx.....\$99
Duo Floppy drive with adaptor.....\$159	Powerbook 5xx floppy drive.....\$149





## G3 PowerMacs Prices Never This Low!

**G3/233**  
**\$1469**

**G3/266/Zip**  
**\$1745**

**G3/266/Zip MT**  
**\$2209**



**Durable,  
High-  
Performance,  
Economic  
UTILITY  
MAC.**

- Identical to StarMax 4000
- Loaded standard configuration
- 604e/200 MT 64/4G/24xCD

**\$1299**

- 604e/200 DT 16/1.2/12x (\$999)
- 17" 0.26 pitch monitor (+\$350)
- Zip(+\$105), Ether(+\$39), RAM

## Power Mac

**G3/266T 32/6G/24x/Zip/AV \$2209**  
**G3/266 32/4G/24x/Zip \$1735**  
**G3/233 32/4G/24x \$1469**  
9600/300 64/4G/24x \$2849  
8600/250 32/4G/24x \$1899  
(above w/ internal Zip) +\$105  
7300/200 32/2G/12x \$1399

## PowerBook

**G3/250 32/5G/20xCD \$4299**  
**1400c/166 16/2G/CD \$1799**  
Apple 33.6k PCMCIA +\$60

**Check website for latest price.**

All products new. Competitive pricing. Credit cards only 2.5% extra. CA 8.25%. Attractive volume discount. Intl and resellers welcome. sales@mactica.com • 650-742-9782

## AppleVision

20" 850 \$1395  
17" 750 \$675

## CPU Upgrade

604e/233 \$349  
604e/200MP \$449

## RAM

SDRAM 32/64/128MB \$57/136/264  
DIMM 32/64MB \$47/122

## Motorola Clone

**604e/200MHz CPU**

64/4G/24x/512KL2/MacPica540 \$1299  
16/1.2G/12x/512KL2/MacPica540 \$999

**MACTICA**  
1-888-666-5147  
www.mactica.com

**www.macadict.com**  
**Get Addicted**

- Links to other key Mac sources
- Chat forums
- News and information
- Contest



**Mac ADDICT**  
A better machine. A better Web site.



# Incredible G3 Prices

Shop Us Online at **WWW.APPLEMACNET.COM**

## Computers

### Apple Powermac G3

- 233MHz/Desktop
- 32MB SDRAM
- 4GB Hard Disk
- 24XCD/ 512kL2
- 2MB SGRAM

**\$1,465**

### Power Mac G3 Series

- 32MB/4GB/24XCD/56k Modem/2MB VR/ATI 64bit...\$1,699
- 32MB/4GB/24XCD/Zip Drive/Ethernet/2MB VR.....\$1,699
- 32MB/6GB/24XCD/Zip Drive/Ethernet/2MB VR.....\$2,199
- 32MB/6GB/24XCD/Zip Drive/Ethernet/2MB VR.....\$2,199
- 128MB/ 6GB /24XCD/ 6MB SGRAM /IX3D Ult. Rez.\$3,199
- 64MB/ 4GB /24XCD/ 2MB SGRAM /Zip Drive.....\$2,499
- 32MB/6GB/24XCD/Zip Drive/Ethernet/2MB VR.....\$2,199
- 64MB/ 4GB /24XCD/ 6MB SGRAM /AV card.....\$3,259
- 32MB/6GB/24XCD/Zip Drive/Ethernet/2MB VR.....\$2,199
- 128MB/two-4GB /24XCD/ 6MB SGRAM /2D-3D/Et.\$6,199

### PowerBook

- 32MB/5GB/20XCD/33.6k modem.....\$4,599
- 1400cs •166MHz/16MB/2GB/12XCD/128 k.....\$1,499

## Blowout Deal!

- PowerMac 6500 - 300MHz Creative Studio Edition
- 32MB/4GB/12XCD/33.6k Mdm/Avid Cinema.....\$1,199

## Memory

**32MB SIMMS/DIMMS**  
**For Only \$59**  
**32MB SDRAM For Apple G3s**  
**For Only \$59**  
*Lifetime Warranty*

### SIMMS

**16MB \$35**  
**32MB \$59**  
**Powerbook**  
1400 3400 G3  
32MB \$79 \$79 \$79  
48MB \$159 \$159  
64MB \$179 \$179  
128MB \$359 \$359  
4MB G3 VRAM .....\$59

### DIMMS

**32MB \$59**  
**64MB \$129**  
**Powerbook**  
**128MB \$259**  
**G3 Memory**  
**32MB \$59**  
**64MB \$129**  
**128MB \$269**

## Printers

Starting at \$95  
Photo DV™.....\$399  
Moto DV™.....\$429  
Edit DV™.....\$679  
FireWire Technology  
\*Camcorder not included! \*MotoDV™ upgrade!

## Printers

### QMS Magicolor 2CX



- Up to 2400 x 600 dpi.
- 24MB RAM
- 16ppm b&w
- 4ppm Color
- Full Color Legal Size
- Ethernet ready
- Transparency sensor

**\$2,999**

### Apple

Laserwriter 4/600.....\$659  
Laserwriter 12/640.....\$1,099

### Epson

Stylus 600.....\$239  
Stylus 800.....\$299  
Stylus 820.....Call  
Stylus 800N.....\$489  
Stylus Photo.....\$299  
Stylus Color 1520.....\$699  
Stylus 3000 w/ postscript.....\$1,669

### HP

DeskJet 1600CM .....\$1,899  
DeskJet 870cse.....\$369  
LaserJet 6Lse.....\$419  
LaserJet 6MP.....\$859  
LaserJet 4MV.....\$2,299  
LaserJet 5M 12ppm 600X600.....Call

### QMS

Magicolor 2 EX (4ppm full color).....\$4,199

## Monitors

### Optique V773

#### 17" Display

- 0.26mm dot pitch
- 1,280 x 1,024 max.resol.
- OnView® Controls
- PC & Mac compatible
- 3 year limited warranty

**\$419**



### Apple

Multiscan 720 17".....\$1,199  
Multiscan 750AV 17".....\$1,199  
Multiscan 850 20".....\$1,199  
Multiscan 850AV 20".....\$1,199

### Nec

MultiSync LCD2000 20".....\$1,199

### Sony

CPD-100 ES 15".....\$1,199  
CPD-200 ES 17".....\$1,199  
CPD-100 GS 15".....\$1,199  
CPD-200 GS 17".....\$1,199  
CPD-400 PS 19".....\$1,199  
GDM-SE2T 20".....\$1,199  
GDM-500 PS 21".....\$1,199

### Viewsonic

E641 14".....\$1,199  
E655 15".....\$1,199  
15GS 15"(graphic series).....\$1,199  
15GA 15" AV (graphic series).....\$1,199  
17GA 17" AV.....\$1,199  
GT770 17"(graphic series).....\$1,199

**CALL 1-800-404-9976**

All Prices are cash discounted. Prices & product availability subject to change without notice - Any merchandise returned is subject to a restocking fee





NOW HFS + SAVVY!

**DATA RECOVERY: 800-440-1904****7 good reasons to choose DriveSavers:**

1. We're the most trusted and respected data recovery specialists.
2. 24-hour, onsite, and weekend service available.
3. Proprietary techniques so advanced we retrieve data others might simply abandon.
4. Over 12 years of Macintosh data recovery experience.
5. Certified to maintain most drive warranties.
6. Featured by CNN, NextStep, BBC, Forbes.
7. All storage devices; Mac OS, DOS, Win95, WinNT, OS/2, UNIX, Sun, SGI, Novell.

**Clip and save this ad. Visit DriveSavers at: [www.drivesavers.com](http://www.drivesavers.com)**

©1997 DRIVESAVERS, INC. 400 BEL MARIN KEYS BLVD., NOVATO, CA 94949, INTL.: 415-382-2000, FAX: 415-883-0780

**Mac Sales**[www.macs4sale.com](http://www.macs4sale.com)**PowerBook Sale!**

Model	Ram / HardDrive	Price
Powerbook 140	4/40	\$229
Powerbook 170	8/120	\$379
Powerbook 160	8/80	\$399
Powerbook 180	8/120	\$499

Powerbooks available with 14.4 modems  
 Duo 230 • Duo 250 • Duo 280c  
 \$249 \$299 \$599

• Add a Duo Dock •  
 \$99

• Add a Duo Dock, Monitor & Kyb •  
 \$229

**Apple Monitors**

20" Apple Multiscan	\$699
17" Apple Multiscan	\$399
13" Apple Color RGB	\$99

**Laser Printers**

Laserwriter IINT	\$199
Select 300	\$199
Laserwriter Pro 600	\$549

**Ink Jet Printers**

HP DW 320 Color	\$149
-----------------	-------

**Desktops**

Quadras • Centrals • PowerMacs	
PM 7200 16/500/CD	\$699
PM 7600 16/500/CD	\$949
PM 8500 16/1gb/CD	\$999
PM 5200 16/1gb/CD	\$899

**Accessories**

Apple Keyboards from	\$10
140 - 170 Batt Rechargers	\$29
Replacement Floppy Drives	\$59

**1-888-MACSALE**

Buy • Sell • Repair • Parts

1-888-622-7253

Prices represent a Cash Discount.  
 Products are Used/Refurbished unless noted.

**Mac POWER**

Sales &amp; Service, Inc.

BUY • SELL • TRADE

UPGRADE • REPAIR

New • Used • Refurb.

- Powerbooks • Printers
- PowerMacs • Peripherals
- Performas • Ram
- Quadras • Parts
- MacII-LC • Software
- Monitors • Accessories

Call now for best prices!

**888-275-POWER**

Fax: 408-448-6132

1080 Blossom Hill Road #E

San Jose, California, 95123

**\$14****Touchpads**

for Macintosh

Never Use a Mouse Again

Order Online Today

[www.ontracdata.com](http://www.ontracdata.com)

1-888-370-8687

BUY • SELL • TRADE • UPGRADE • REPAIR  
[www.awhen.com](http://www.awhen.com)

G3 Smokes Pentium II, Starting from \$1499

We'll take your old computer and credit you for your new G3!!! Call on current pricing!!!

Power Book 5300 /100 8/500	\$1199
Video Cards 24-bit apple nubus	\$88
Mac IIcx 13" RGB, keyboard, mouse	\$199
Mac IIfx 13" RGB, keyboard, mouse	\$199
Mac IIfx 13" RGB, keyboard, mouse	\$249
Performa 5200 8/80	\$999
13" RGB Apple	\$99
SE 80 8/80	\$149
Quadra 700 8/230	\$349
Quadra 660 av 8/230 /CD	\$399
Quadra 950 16/830	\$499
Centris 650 8/250	\$379
Quadra 840 av 8/500	\$599
Apple LW	\$149
Apple LW II	\$299

Toll Free Sales Hot-line @ 888-89-AWHEN

ALL OTHERS USE (801) 547-9241 VOICE

8:00am-6:00pm MDT (801) 771-0079 FAX

We accept all major credit cards

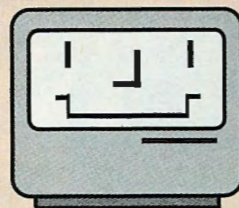
**BUY • SELL • TRADE  
MEMORY**

• WE CAN **BEAT**  
 ANY QUOTED PRICE  
 IN THIS MAGAZINE

• WE CAN **PAY HIGHER**  
 THAN ANY ONE FOR  
**YOUR OLD or**

**BROKEN MEMORY**

**Lifetime Warranty  
 on All Parts**

**1-800-4-MEMORY**[HTTP://18004MEMORY.COM](http://18004MEMORY.COM)**USED  
MACINTOSH!**

- ★ We match buyers and sellers of used MAC equipment!
- ★ All MAC models available; SE to POWER PC.
- ★ All hardware is tested and includes a limited warranty.
- ★ Qualifying School, Gov't and Fortune 1000 POs Welcome
- ★ We also specialize in used trade-ins

**The Computer  
Exchange****800-304-4639**[www.compexch.com](http://www.compexch.com)

Cust Service: 404-315-0897

Fax: 404-315-7840

2100 Cheshire BR Rd., Suite E  
 Atlanta, GA 30324







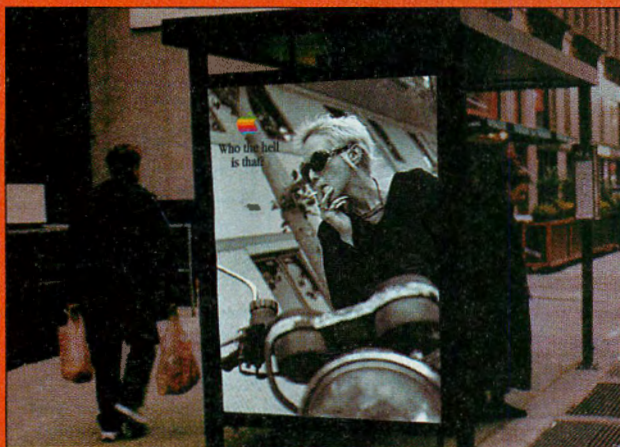
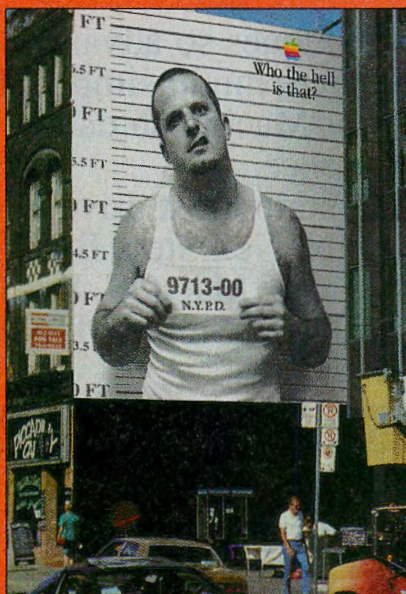
# shut down

shut down

## Ad Nauseam

**A**fter running out of high-profile visionaries to exploit as pitchmen for the Think Different campaign, Apple recently rolled out its new

Who the hell is that?™ campaign. The hot new billboards featuring complete unknowns doing nothing special (three of whom are shown below) will be popping up soon nationwide. Spokespersons for Apple's ad agency, Chiat Day, rave that even they don't know who these people are, and cite MTV's successful *Real World* series as inspiration for the ads. MTV has denied all responsibility.



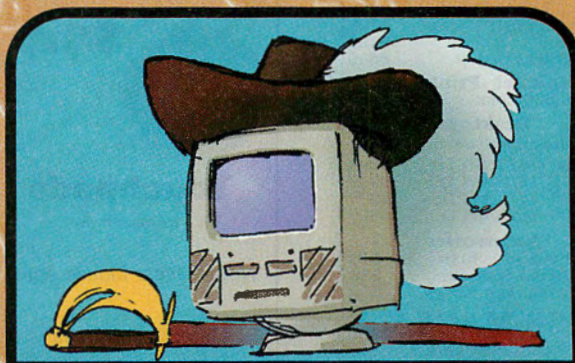
## MACADDICT CORRECTIONS

- ✓ We fully intended to put out a magazine last month, but somebody took a vacation and there was no one left to do the work. Sorry.
- ✓ In last month's features section we were supposed to run articles covering Windows NT and Intergraph in an attempt to attract wealthy advertisers, but we were beaten to the punch. We'll try to be quicker next time.
- ✓ The previous month's Disc didn't include a bunch of stuff that a lot of people probably wanted. We apologize for the omissions.
- ✓ An article published in the last Get Info section mistakenly reported that Apple needs to find a new CEO quickly. We meant to say that Apple needs to find a sense of humor quickly. Oops.
- ✓ In the same Get Info article we included a list of potential candidates for the CEO position but forgot to mention Carrot Top, Pee Wee Herman, Cheryl England, John Scully, Bill Gates, Riana Rouge, Michael Ovitiz, Nancy Reagan, and Dilbert. Again, we apologize for the error.
- ✓ In last month's issue we made a ton of really boneheaded mistakes that nobody caught. We are sorry anyway.

## Deep Thoughts by Gil Amelio

"Heidi (Roizen) was bringing experience, contacts, and experienced judgment to her role at Apple, and I preferred to ignore the mention that she had once been a girlfriend of Steve Jobs and that some ill will may have lingered between them... I'd leave the gossip for others to ponder."

—As excerpted from *On the Firing Line: My 500 Days at Apple*, by Gil Amelio and William L. Simon



THE NEW "ALL IN ONE AND ONE FOR ALL" FORM FACTOR.

Doodle by Mark Simmons



Mac users appreciate easy. And no one makes having a website easier than InterLand®. From as little as \$19.95 a month, you can start a business, promote an existing business or even share your hobby with the world. And we'll be with you every step of the way with toll-free, 24 hour support. We can even help you with professional website design. Whether you're a beginner or a computer veteran, InterLand can help bring you the world.



## **Pricing From \$19.95 per Month**

- 80 megabyte storage
- unlimited e-mail forwarding
- unlimited e-mail aliases
- unlimited e-mail autoresponders
- free domain registration\*
- front page '97 & '98 support
- real time credit card servers
- unix and nt servers
- anonymous FTP
- real time statistics
- secure server
- RealPlayer
- RealAudio
- Cold Fusion and more

**1-800-599-0546**  
**(404) 586-9999**

\*EXCLUDES INTERIC'S \$35 ANNUAL DOMAIN FEE. SAME DAY SET UP  
ON ALL ORDERS. \$40 ONE TIME SET UP FEE ON NEW WEBSITES.

**Best  
Reseller  
Prices.**



# **HE'S GOT A WEBSITE. DO YOU?**

**Website Hosting  
From \$19.95**

**Resellers, We Refer  
Design Work**

**30 Day Money Back  
Guarantee**

***The Best Support and Pricing in the Industry.***



# myth

THE FALLEN LORDS

GAME OF THE YEAR!

— MacWorld

MACINTOSH GAME  
of the YEAR!

— CINET GAMECENTER

FREAKIN' AWESOME:  
HIGHEST RATING!

— MacAddict

5 of 5 STARS:  
PERFECT!

— Inside MAC GAMES



For more information visit [www.bungie.com](http://www.bungie.com) or call 800 295-0060.

Myth: The Fallen Lords and bungie.net are trademarks of Bungie Software Products Corporation. All rights reserved. © 1997 Bungie Software Products Corporation.

**bungie.net**

**BUNGIE**